

No.

3079

United States⁴
Circuit Court of Appeals
For the Ninth Circuit.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

Plaintiff in Error,

vs.

UNITED STATES OF AMERICA,

Defendant in Error.

Transcript of Record.

Upon Writ of Error to the United States District
Court, for the Southern District of Cal-
ifornia, Southern Division.

FILED

NOV 13 1917

F. D. MONCKTON,
CLERK.

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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original record are printed literally in italic; and, likewise, cancelled matter appearing in the original record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in italics the two words between which the omission seems to occur.]

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Names and Addresses of Attorneys.

For Plaintiff in Error:

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Angeles, California.

For Defendant in Error:

ROBERT O'CONNOR, CLYDE R. MOODY,
Esqs., ROSCOE F. WALTER, Special As-
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Building, Los Angeles, California.

*In the District Court of the United States of America,
Southern District of California, Southern Division.*

UNITED STATES OF AMERICA,

Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

Defendant.

No. 376—Civil.

Citation.

United States of America, to the United States of
America, Greeting:

You are hereby cited and admonished to be and
appear in the United States Circuit Court of Appeals
for the Ninth Circuit, at the city of San Francisco,
state of California, thirty days from and after the day
this citation bears date, pursuant to writ of error filed
in the clerk's office of the United States District Court
for the Southern District of California, Southern Di-
vision, sitting at Los Angeles, wherein The Atchison,
Topeka and Santa Fe Railway Company is plaintiff in
error, and you are defendant in error, to show cause,
if any there be, why the judgment rendered against
the said plaintiff in error as in said writ of error men-
tioned should not be corrected, and why speedy justice
should not be done the parties in that behalf.

Witness the Honorable Benjamin F. Bledsoe, judge
of the United States District Court, this 24 day of
May, A. D. 1916.

BENJAMIN F. BLEDSOE,
United States District Judge.

Service of above citation on plaintiff above named by copy this 24th day of May, 1916, acknowledged.

M. G. GALLAHER,

Asst. U. S. Atty.

[Endorsed]: No. 376 Civil. Dept. In the U. S. District Court, Sou. Dist. of Calif., Sou. Divis. United States of America, plaintiff, v. The A. T. & S. F. Ry. Co., a corp., defendant. Citation. Filed May 24, 1916. Wm. M. Van Dyke, clerk; by R. S. Zimmerman, deputy clerk. E. W. Camp, Paul Burks, Robt. Brennan, M. W. Reed, U. T. Clotfelter, 409 Kerckhoff Building, Los Angeles, Cal., telephone Main 2980, attorneys for deft.

Writ of Error.

The President of the United States of America, to the Honorable Robert S. Dean, Judge of the United States District Court for the Southern District of California, Southern Division, Greeting:

Because in the record and proceedings, as also in the rendition of the judgment of a plea which is in the said District Court before you, between The Atchison, Topeka and Santa Fe Railway Company, plaintiff in error, and The United States of America, defendant in error, a manifest error hath happened, to the damage of The Atchison, Topeka and Santa Fe Railway Company, plaintiff in error, as by said complaint appears, and we being willing that error, if any hath been, should be corrected, and full and speedy justice be done to the parties aforesaid in this behalf, do command you if judgment be therein given, that under your seal you send the record and proceedings afore-

said, with all things concerning the same, to the United States Circuit Court of Appeals for the Ninth Circuit, together with this writ, so that you have the same at San Francisco, in the state of California, where said court is sitting, within thirty days from the date hereof, in the said Circuit Court of Appeals, to be then and there held, and the record and proceedings aforesaid being inspected, the said United States Circuit Court of Appeals may cause further to be done therein to correct the error what of right and according to the laws and customs of the United States should be done.

Witness the Honorable Edward D. White, chief justice of the United States, this 24th day of May, A. D. 1916, and of our Independence the one hundred fortieth.

WM. M. VAN DYKE,
Clerk of the United States District Court for the
Southern District of California, Southern Di-
vision.

By R. S. Zimmerman,
Deputy Clerk.

The foregoing writ of error is hereby allowed this 24th day of May, 1916.

BLED SOE,
United States District Judge.

I hereby certify that a copy of the within writ was on the 24th day of May, 1916, lodged in the clerk's office of the said United States District Court for the Southern District of California, Southern Division, for the said defendant in error.

(Seal) WM. M. VAN DYKE,
Clerk United States District Court, Southern District
of California, Southern Division.

By R. S. Zimmerman,
Deputy Clerk.

[Endorsed]: No. 376 Civil. Dept. In the U. S. Dist. Court, Sou. Dist. of Calif., Southern Divis. United States of America, plaintiff, v. The A. T. & S. F. Ry. Co., a corp., defendant. Writ of error. Original. Filed May 24, 1916. Wm. M. Van Dyke, clerk; by R. S. Zimmerman, deputy clerk. E. W. Camp, Paul Burks, Robt. Brennan, M. W. Reed, U. T. Clotfelter, 409 Kerckhoff Building, Los Angeles, Cal., telephone Main 2980, attorneys for deft.

*In the District Court of the United States for the
Southern District of California,
Division. 2678.*

THE UNITED STATES OF AMERICA,

Plaintiff,

v.

ATCHISON, TOPEKA & SANTA FE RAILWAY
COMPANY,

Defendant.

No. 376 Civ.

Complaint.

Now comes the United States of America, by Albert Schoonover, United States attorney for the Southern District of California, and brings this action on behalf of the United States against the Atchison, Topeka & Santa Fe Railway Company, a corporation, organized and doing business under the laws of the state of Kansas, and having an office and place of business at Needles, in the state of California; this action being brought upon suggestion of the attorney general of the United States at the request of the Interstate Com-

merce Commission, and upon information furnished by said commission.

FOR A FIRST CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 4:50 o'clock p. m. on October 4, 1914, upon its line of railroad at and between the stations of Bakersfield, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain engineer and employee, to-wit: J. P. Shomate, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 4:50 o'clock p. m. on said date, to the hour of 11:05 o'clock a. m. on October 5, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train 1/342 & extra, drawn by its own locomotive engine No. 3203, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A SECOND CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 4:50 o'clock p. m. on October 4, 1914, upon its line of railroad at and between the stations of Bakersfield, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain fireman and employee, to-wit: R. V. McLean, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 4:50 o'clock p. m. on said date, to the hour of 11:05 o'clock a. m. on October 5, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train 1/342 & extra, drawn by its own locomotive engine No. 3203, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A THIRD CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 4:50 o'clock p. m. on October 4, 1914, upon its line of railroad at and between the stations of Bakersfield, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain conductor and employee, to-wit: J. A. Evans, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 4:50 o'clock p. m. on said date, to the hour of 11:05 o'clock a. m. on October 5, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train 1/342 & extra, drawn by its own locomotive engine No. 3203, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A FOURTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 4:50 o'clock p. m. on October 4, 1914, upon its line of railroad at and between the stations of Bakersfield, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain trainman and employee, to-wit: P. Walsh, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 4:50 o'clock p. m. on said date, to the hour of 11:05 o'clock a. m. on October 5, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train 1/342 & extra, drawn by its own locomotive engine No. 3203, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A FIFTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 4:50 o'clock p. m. on October 4, 1914, upon its line of railroad at and between the stations of Bakersfield, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain trainman and employee, to-wit: B. A. Dills, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 4:50 o'clock p. m. on said date, to the hour of 11:05 o'clock a. m. on October 5, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train 1/342 & extra, drawn by its own locomotive engine No. 3203, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A SIXTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 4:50 o'clock p. m. on October 4, 1914, upon its line of railroad at and between the stations of Bakersfield, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain trainman and employee, to-wit: B. J. Clark, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 4:50 o'clock p. m. on said date, to the hour of 11:05 o'clock a. m. on October 5, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train 1/342 & extra, drawn by its own locomotive engine No. 3203, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A SEVENTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 1:20 o'clock p. m. on October 10, 1914, upon its line of railroad at and between the stations of Needles, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain engineer and employee, to-wit: E. E. Anderson, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 1:20 o'clock p. m. on said date, to the hour of 6:20 o'clock a. m. on October 11, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 955, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR AN EIGHTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 1:20 o'clock p. m. on October 10, 1914, upon its line of railroad at and between the stations of Needles, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain fireman and employee, to-wit: F. Conlan, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 1:20 o'clock p. m. on said date, to the hour of 6:20 o'clock a. m. on October 11, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 955, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A NINTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (Contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 1:20 o'clock p. m. on October 10, 1914, upon its line of railroad at and between the stations of Needles, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain conductor and employee, to-wit: F. A. Wills, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 1:20 o'clock p. m. on said date, to the hour of 6:20 o'clock a. m. on October 11, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 955, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A TENTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 1:20 o'clock p. m. on October 10, 1914, upon its line of railroad at and between the stations of Needles, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain trainman and employee, to-wit: J. Conway, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 1:20 o'clock p. m. on said date, to the hour of 6:20 o'clock a. m. on October 11, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 955, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR AN ELEVENTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 1:20 o'clock p. m. on October 10, 1914, upon its line of railroad at and between the stations of Needles, in the state of California, and Barstow, in said state, within the jurisdiction of this court, required and permitted its certain trainman and employee, to-wit: J. McLaughlin, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 1:20 o'clock p. m. on said date, to the hour of 6:20 o'clock a. m. on October 11, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 955, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A TWELFTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 9:15 p. m. on October 21, 1914, upon its line of railroad at and between the stations of Barstow, in the state of California, and Needles, in said state, within the jurisdiction of this court, required and permitted its certain engineer and employee, to-wit: T. E. Galligan, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 9:15 o'clock p. m. on said date, to the hour of 2:15 o'clock p. m. on October 22, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 1656, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A THIRTEENTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 9:15 o'clock p. m. on October 21, 1914, upon its line of railroad at and between the stations of Barstow, in the state of California, and Needles, in said state, within the jurisdiction of this court, required and permitted its certain fireman and employee, to-wit: F. L. Kappler, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 9:15 o'clock p. m. on said date, to the hour of 2:15 o'clock p. m. on October 22, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 1656, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A FOURTEENTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 9:15 o'clock p. m. on October 21, 1914, upon its line of railroad at and between the stations of Barstow, in the state of California, and Needles, in said state, within the jurisdiction of this court, required and permitted its certain conductor and employee, to-wit: L. C. Powell, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 9:15 o'clock p. m. on said date, to the hour of 2:15 o'clock p. m. on October 22, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 1656, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A FIFTEENTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 9:15 o'clock p. m. on October 21, 1914, upon its line of railroad at and between the stations of Barstow, in the state of California, and Needles, in said state, within the jurisdiction of this court, required and permitted its certain trainman and employee, to-wit: A. M. Eldred, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 9:15 o'clock p. m. on said date, to the hour of 2:15 o'clock p. m. on October 22, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 1656, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

FOR A SIXTEENTH CAUSE OF ACTION

plaintiff alleges that said defendant is, and was during all the times mentioned herein, a common carrier engaged in interstate commerce by railroad in the state of California.

Plaintiff further alleges that in violation of the Act of Congress, known as "An Act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (contained in 34 Statutes at Large, page 1415), said defendant, beginning at the hour of 9:15 o'clock p. m. on October 21, 1914, upon its line of railroad at and between the stations of Barstow, in the state of California, and Needles, in said state, within the jurisdiction of this court, required and permitted its certain trainman and employee, to-wit: G. C. Winton, to be and remain on duty as such for a longer period than sixteen consecutive hours, to-wit: from said hour of 9:15 o'clock p. m. on said date, to the hour of 2:15 o'clock p. m. on October 22, 1914.

Plaintiff further alleges that said employee, while required and permitted to be and remain on duty as aforesaid, was engaged in and connected with the movement of said defendant's train extra, drawn by its own locomotive engine No. 1656, said train being then and there engaged in the movement of interstate traffic.

Plaintiff further alleges that by reason of the violation of said Act of Congress, said defendant is liable to plaintiff in the sum of five hundred dollars.

Wherefore, plaintiff prays judgment against said de-

fendant in the sum of eight thousand dollars and its costs herein expended.

ALBERT SCHOONOVER,
United States Attorney.
CLYDE R. MOODY,
Asst. United States Attorney.

[Endorsed]: Form No. 680. No. 376 Civ. In the District Court of the United States for the So. Dist. of California, Southern Division. United States of America vs. Atchison, Topeka & Santa Fe Ry. Co. Complaint. Filed Apr. 26, 1915. Wm. M. Van Dyke, clerk; by Chas. N. Williams, deputy clerk.

United States of America.
*District Court of the United States, Southern District
of California, Southern Division.*

THE UNITED STATES OF AMERICA,

Plaintiff,

vs.

ATCHISON, TOPEKA & SANTA FE RY CO.,
Defendant.

Summons.

Action brought in the said District Court, and the complaint filed in the office of the clerk of said District Court, in the city of Los Angeles, county of Los Angeles, state of California.

The President of the United States of America, Greeting: To the Atchison, Topeka & Santa Fe Ry Co.

You are hereby required to appear in an action brought against you by the above-named plaintiff, in the District Court of the United States, in and for the Southern District of California, Southern Division, and

to file your plea, answer or demurrer, to the complaint filed therein (a certified copy of which accompanies this summons), in the office of the clerk of said court, in the city of Los Angeles, county of Los Angeles, within twenty days after the service on you of this summons, or judgment by default will be taken against you.

And you are hereby notified that unless you appear and plead, answer or demur, as herein required, the plaintiff will take judgment for any money or damages demanded in the complaint as arising from contract or will apply to the court for any further relief demanded in the complaint.

Witness the Honorable Benjamin F. Bledsoe, judge of the District Court of the United States, in and for the Southern District of California, this 26th day of April, in the year of our Lord one thousand nine hundred and fifteen and of our Independence the one hundred and thirty-ninth.

(Seal)

WM. M. VAN DYKE,

Clerk.

By R. S. Zimmerman,

Deputy Clerk.

United States Marshal's Office, Southern District of California.

I hereby certify that I received the within writ on the 27th day of April, 1915, and personally served the same on the 27th day of April, 1915, by delivering to and leaving with A. T. & S. F. Ry. Co., by E. W. Camp, attorney, said defendant named therein, personally, at the county of Los Angeles in said district, a certified copy thereof, together with a copy of the

complaint, certified to by Wm. M. Van Dyke, attached thereto.

C. T. WALTON,
U. S. Marshal.
By J. F. Durlin,
Deputy.

Los Angeles, Apl. 27, 1915.

[Received 4-50 p., Apr. 26, 1915, m. U. S. Marshal's office, Los Angeles, Cal.]

[Endorsed]: Marshal's Civil Docket No. 2661. No. 376 Civ. U. S. District Court, Southern District of California, Southern Division. United States of America vs. A. T. & S. F. Ry. Co. Summons. Albert Schoonover, plaintiff's attorney. Filed Apr. 28, 1915. Wm. M. Van Dyke, clerk; by R. S. Zimmerman, deputy clerk.

*In the District Court of the United States of America,
Southern District of California, Southern Division.*

THE UNITED STATES OF AMERICA,
Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY, a Corporation,
Defendant.

No. 376—Civil.

Answer.

Comes now The Atchison, Topeka and Santa Fe Railway Company, a corporation, defendant, and for

its answer and defense to the complaint on file herein respectfully shows:

I.

That it admits that the persons named in said complaint were and that each of said persons was, at or about the times stated in said complaint, detained in the service of defendant for the purposes and between the points in said complaint stated, and that said persons during the times of such detention were engaged in interstate commerce as employes of this defendant, which was at the times and places stated in said complaint engaged in interstate commerce substantially as in said complaint alleged.

II.

AFFIRMATIVE DEFENSE TO COUNTS FIRST TO SIXTH,
INCLUSIVE.

For its further answer and by way of affirmative defense to the first, second, third, fourth, fifth and sixth causes of action in said complaint set forth, defendant alleges, by way of relief and exoneration from the provisions of the Act of Congress, approved March 4, 1907 (34 St. L. 1415), known and designated as the Hours of Service Act referred to in said and each of said alleged causes of action, that the train mentioned in each of said alleged causes of action and which was known and designated as "Extra 3203 east" or "1/34D," was delayed and detained enroute at a station called Cable, in the county of Kern, state of California, while enroute on the day and date named in said causes of action of plaintiff's complaint, for a period of 2 hours 25 minutes, on account of and by

reason of the said train breaking in two, and that the said break-in-two and delay of 2 hours 25 minutes was the result of a cause not known to the defendant or its officers, agents, or any of them, in charge of said train and of such employes, at the time said train and employes left Bakersfield, the terminal, from which it started at 5:45 o'clock a. m. on October 2, 1914, and that the same was caused by an unavoidable accident, and one that could not have been foreseen by this defendant or any of its officers, agents or employes; all of which and the time of delay was promptly reported to the Interstate Commerce Commission by the defendant herein, together with defendant's claim of exemption for the 2 hours 25 minutes delay at Cable, as aforesaid.

Wherefore, defendant prays that the delay of 2 hours 25 minutes by reason of the unavoidable accident as aforesaid, be allowed defendant, and that the provisions of said Act of Congress shall not apply to this defendant in the first, second, third, fourth, fifth and sixth alleges causes of action set forth in plaintiff's complaint, and that defendant go hence without day, together with its costs.

AFFIRMATIVE DEFENSE TO COUNTS SEVENTH TO
ELEVENTH, INCLUSIVE.

For its further answer and by way of affirmative defense to the seventh, eighth, ninth, tenth and eleventh causes of action in said complaint set forth, defendant alleges, by way of relief and exoneration from the provisions of the Act of Congress, approved March 4, 1907 (34 St. L. 1415), known and designated as the

Hours of Service Act referred to in said and each of said alleged causes of action, that the train mentioned in each of said alleged causes of action and which was known and designated as "Extra 955 west," was delayed and detained enroute at a station called Danby, in the county of San Bernardino, state of California, while enroute on the day and date named in said causes of action of plaintiff's complaint, for a period of 1 hour on account of and by reason of the breaking in two of an opposing train known and designated as "Extra 1641 east," and the pulling of drawbars from D. S. L. car 51202 and breaking of a knuckle on A. T. & S. F. car 86671, by reason whereof the track over which said extra train 955 west was moving became blocked and impassable, and that the said breaking in two of said train extra 1641 east and the delay of 1 hour to which said train extra 955 west and the employes constituting the crew in charge thereof were thereby subjected, was the result of a cause not known to the defendant or its officers, agents, or any of them, in charge of said train, and of such employes, at the time said train extra 955 west and employes left Needles, the terminal, from which said train started at 2:25 p. m. on October 10, 1914, and that the same was caused by an unavoidable accident, and one that could not have been foreseen by this defendant or any of its officers, agents or employes; all of which and the time of delay was promptly reported to the Interstate Commerce Commission by the defendant herein, together with defendant's claim of exemption for the 1 hour's delay at Danby, as aforesaid.

Wherefore, defendant prays that the delay of 1 hour

by reason of the unavoidable accident as aforesaid, be allowed defendant, and that the provisions of said Act of Congress shall not apply to this defendant in the seventh, eighth, ninth, tenth and eleventh alleged causes of action set forth in plaintiff's complaint, and that defendant go hence without day, together with its costs.

AFFIRMATIVE DEFENSE TO COUNTS TWELFTH TO
SIXTEENTH, INCLUSIVE.

For its further answer and by way of affirmative defense to the twelfth, thirteenth, fourteenth, fifteenth and sixteenth causes of action in said complaint set forth, defendant alleges, by way of relief and exoneration from the provisions of the Act of Congress, approved March 4, 1907 (34 St. L. 1415), known and designated as the Hours of Service Act referred to in said and each of said alleged causes of action, that the train mentioned in each of said alleged causes of action and which was known and designated as "Extra 1656 east," was delayed and detained enroute at a certain point on this defendant's line of way between stations designated as "mile post 691," in the county of San Bernardino, state of California, while en route on the day and date named in said causes of action of plaintiff's complaint, for a period of 4 hours 25 minutes on account of and by reason of said train breaking in two and that the said break-in-two and delay of four hours and 25 minutes was the result of a cause not known to the defendant, or its officers, agents, or any of them, in charge of said train, and of such employees, at the time said train and employes

left Barstow, the terminal, from which it started at 10:00 p. m. on October 21, 1914, and that the same was caused by an unavoidable accident, and one that could not have been foreseen by this defendant or any of its officers, agents or employees; all of which, and the time of delay was promptly reported to the Interstate Commerce Commission by the defendant herein, together with defendant's claim of exemption for the 4 hours and 25 minutes delay at mile post 691, as aforesaid.

Wherefore, defendant prays that the delay of 4 hours and 25 minutes by reason of the unavoidable accident as aforesaid, be allowed defendant, and that the provisions of said Act of Congress shall not apply to this defendant in the twelfth, thirteenth, fourteenth, fifteenth and sixteenth alleged causes of action set forth in plaintiff's complaint, and that the defendant go hence without day, together with its costs.

E. W. CAMP,
U. T. CLOTFELTTR,
ROBERT BRENNAN,
PAUL BURKS,
Attorneys for Defendant.

State of California, County of Los Angeles—ss.

A. G. Wells, being by me first duly sworn, says that he is an officer, namely, the general manager, of the defendant corporation named in the foregoing answer, that he has read said answer and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated on infor-

mation or belief, and that as to those matters he believes it to be true.

A. G. WELLS.

Subscribed and sworn to before me this 24th day of June, A. D. 1915.

(Seal)

C. N. STEDMAN,

Notary Public in and for the County of Los Angeles,
State of California.

[Endorsed]: Original. No. 376 Civil. Dept.
In the U. S. District Court, Southern Dist. of Calif.,
Southern Division. The United States of America,
plaintiff, v. The A. T. & S. F. Ry. Co., a corporation,
defendant. Answer. Received copy of the within an-
swer this day of June, 1915. Albert Schoonover,
attorney for plaintiff. Filed Jun. 25, 1915. Wm. M.
Van Dyke, clerk; by R. S. Zimmerman, deputy clerk.
E. W. Camp, Paul Burks, Robert Brennan, U. T.
Clotfelter, 409 Kerckhoff Building, Los Angeles, Cal.,
telephone Main 2980, attorneys for defendant.

*In the District Court of the United States, in and for
the Southern District of California, Southern Di-
vision.*

THE UNITED STATES OF AMERICA,

Plaintiffs,

vs.

THE ATCHISON, TOPEKA & SANTA FE RAIL-
WAY COMPANY, a Corporation,

Defendant.

No. 376 Civil.

Verdict.

We, the jury in the above-entitled cause, find for the

plaintiff, The United States of America, by direction of the court.

Los Angeles, California, November 24th, 1915.

R. E. MAYNARD,

Foreman.

[Endorsed]: No. 376 Civ. U. S. District Court, Southern District of California, Southern Division. United States of America vs. A. T. & S. F. Ry. Co. Verdict. Filed Nov. 24th, 1915. Wm. M. Van Dyke, clerk; by T. F. Green, deputy.

United States of America.

District Court of the United States, Southern District of California, Southern Division.

THE UNITED STATES OF AMERICA,

Plaintiffs,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

Defendant.

No. 376 Civil.

Judgment.

This cause coming on regularly for trial on Tuesday, the 16th day of November, 1915, being a day in the July term, A. D. 1915, of the District Court of the United States of America, in and for the Southern District of California, Southern Division, before the court and a jury of twelve (12) good and lawful jurors, who were duly impanelled and sworn to try this cause; Roscoe F. Walter, Esq., special assistant to the attorney general, appearing as counsel for the

United States of America; Paul Burks, Esq., and Robert Brennan, Esq., appearing as counsel for the defendant; and the trial having been proceeded with on said 16th day of November, 1915, and also on the 17th, 18th, 19th, 20th, 22nd, 23rd and 24th days of November, 1915, and witnesses having been duly sworn and having testified, and documentary evidence having been introduced, and read into the record; and counsel for the plaintiffs having moved the court for an order directing the jury to render a verdict for plaintiffs and judgment, on all of the counts contained in the complaint herein; and said motion having been submitted to the court for its consideration and decision, and thereafter on said 24th day of November, 1915, the court having rendered its oral opinion, allowing plaintiffs' motion and thereupon directed the jury to return from the jury box the following verdict, to-wit:

"In the District Court of the United States, in and for the Southern District of California, Southern Division.

THE UNITED STATES OF AMERICA,

Plaintiffs,

vs.

THE ATCHISON, TOPEKA & SANTA FE RAIL-
WAY COMPANY, a Corporation,

Defendant.

No. 376 Civil.

VERDICT.

We, the jury in the above-entitled cause, find for the

plaintiff, The United States of America, by direction of the court.

Los Angeles, California, November 24th, 1915.

R. E. MAYNARD,
Foreman."

Whereupon, counsel for the plaintiffs move the court for rendition of judgment on the verdict heretofore rendered, fixing the penalty on each count contained in the complaint; thereupon the court pronounces judgment as follows, to-wit: that the defendant, The Atchison, Topeka & Santa Fe Railway Company, a corporation, pay a penalty of seventy-five (\$75.00) dollars on each of the sixteen (16) counts contained in the complaint, and all costs incurred herein;

Now, therefore, by virtue of the law and by reason of the premises aforesaid, it is considered by the court that the plaintiffs, The United States of America, have and recover of and from the defendant, the Atchison, Topeka & Santa Fe Railway Company, a corporation, the sum of twelve hundred (\$1200.00) dollars, together with the plaintiffs' costs and disbursements in this behalf, taxed at \$

Judgment entered November 27th, 1915.

WM. M. VAN DYKE,
Clerk.

By T. F. Green,
Deputy Clerk.

*In the District Court of the United States, for the
Southern District of California, Southern Di-
vision.*

THE UNITED STATES OF AMERICA,

Plaintiffs,

vs.

THE ATCHISON, TOPEKA & SANTA FE RAIL-
WAY COMPANY, a Corporation,

Defendant.

No. 376 Civil.

I, Wm. M. Van Dyke, clerk of the District Court of the United States for the Southern District of California, do hereby certify the foregoing to be a full, true and correct copy of an original judgment entered in the above-entitled cause, and recorded in judgment register No. 2, for the Southern Division, at page 331 thereof, and I do further certify that the foregoing papers hereto annexed constitute the judgment roll in said action.

Attest my hand and the seal of said District Court,
this 27 day of November, A. D. 1915.

(Seal)

WM. M. VAN DYKE,

Clerk.

By T. F. Green,

Deputy Clerk.

[Endorsed]: No. 376 Civ. U. S. District Court,
Southern District of California, Southern Division.
United States of America vs. A. T. & S. F. Ry. Co.
Copy of judgment. Filed Nov. 27th, 1915. Wm. M.
Van Dyke, clerk; by T. F. Green, deputy.

[Endorsed]: No. 376 Civil. In the Circuit Court

of the United States, Ninth Judicial Circuit for the Southern District of California, Southern Division. The United States of America vs. The Atchison, Topeka & Santa Fe Ry. Co., a corp. Judgment roll. Filed Nov. 27th, 1915. Wm. M. Van Dyke, clerk; by T. F. Green, deputy clerk. Recorded judg. register book No. 2, page 331.

*In the District Court of the United States of America,
Southern District of California, Southern Division.*

No. 376—Civil.

THE UNITED STATES OF AMERICA,

Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY, a Corporation,

Defendant.

Bill of Exceptions.

Be it remembered that the above-entitled cause came on regularly for trial on Tuesday, November 15, 1915, at 10 o'clock a. m., before Honorable R. S. Bean, United States District Judge, and a jury, duly empaneled and sworn; Clyde R. Moody and Roscoe F. Walter, Esqs., appearing for plaintiff, and Paul Burks and Robert Brennan, Esqs., appearing for defendant; whereupon testimony was taken and proceedings were had as follows:

The Court: I understand there is an admission of the service, and justification is pleaded as an affirm-

ative defense.

Mr. Burks: Yes, sir.

The Court: That gives the defendant the opening and closing.

(Opening Statement.)

Mr. Burks: This is a civil action, not a criminal action, brought upon the suggestion of the Attorney General of the United States, at the request of the Interstate Commerce Commission, and upon information furnished by the commission, against The Atchison, Topeka and Santa Fe Railway Company, as defendant, to recover penalties aggregating \$8,000.00 for sixteen alleged violations of the hours of service act, approved March 4, 1907, entitled "An act to promote the safety of employes and travelers on railroads by limiting the hours of service thereon." Defendant admits that the employes named in the sixteen counts of the complaint were retained in service during the period therein alleged, but the answer alleges that in each instance the retention of such employes in service in excess of sixteen hours was due to one of the causes enumerated in the proviso found in section 3 of the act. Three trains are involved in this action. The complaint contains sixteen counts. Count 1 to 6, inclusive, relate to the service of six employes constituting the crew of a train drawn by engine No. 3203, who were on duty between Bakersfield and Barstow, in this state, for a period of 18 hours and 15 minutes, to-wit, from 4:50 p. m. on October 4 until 11:05 a. m. on October 5, 1914. That service is admitted, but by way of affirmative defense to those six counts de-

defendant has set up in its answer by way of relief from the provisions of the hours of service act that the train mentioned in each of said six alleged causes of action which were known and designated as extra 3203 east, or 1st 34-D, was delayed and detained en route at a station called Cable, in the county of Kern, state of California, while en route on the day and date named in said causes of action for a period of 2 hours and 25 minutes on account of and by reason of such train breaking in two, and that said break in two and delay of 2 hours and 25 minutes was the result of a cause not known to defendant or its officers or agents or any of them in charge of said train and said employes at the time said train and said employes left Bakersfield, the terminal from which it started at 5:45 o'clock p. m. on October 2, 1914, and that the same was caused by an unavoidable accident and one that could not have been foreseen by this defendant, or any of its officers, agents or employes, all of which and the time of delay was promptly reported to the Interstate Commerce Commission by the defendant herein, together with the defendant's claim of exemption on account of the 2 hours and 25 minutes delay as aforesaid.

Counts 7 to 11 of the complaint, inclusive, relate to the service of five employes constituting the crew of a train drawn by engine No. 955, who were on duty between Needles and Barstow, in this state, for 17 hours, from 1:20 on October 10 to 6:20 October 11. The answer of defendant so far as it relates to these counts, sets up that the train mentioned, which was known and designated as extra 955 west, was delayed

and detained en route at a station called Danby, in the county of San Bernardino, for the period of 1 hour on account of and by reason of the breaking in two of an opposing train designated as extra 1641 east, and pulling of draw bar out of car D. S. L. 51202, and the breaking of a knuckle on car A. T. 86671, by reason whereof the track over which said extra 955 west was moving became blocked and impassable, and that the said breaking in two of said extra 1641 east and the delay of 1 hour to which said train extra 955 west and the employes constituting the crew in charge thereof was subjected by reason thereof, was the result of a cause not known to the defendant, or the agents or any of them in charge of said train and said employes, at the time said train extra 955 west and the employes left Needles—the terminal from which they started at 2:25 p. m. on October 10, 1914—and that the same was cause by an unavoidable accident or one that could not have been foreseen by the defendant, all of which delay was promptly reported to the commission.

Counts 12 to 16 of the complaint relate to the service of five employes constituting the crew of the train drawn by engine 1656, who were on duty between Barstow and Needles, in this state, while moving in the opposite direction from the train mentioned in counts 7 to 11, for a period of 17 hours, from 9:15 p. m. on October 21, to 2:15 p. m. on October 22. Defendant's answer to these counts alleges that said train, extra 1656 east, was delayed and detained en route at a certain point on defendant's line of railway, between the stations, known and designated as "mile post 691," while en route on the day and date in said

causes of action named for a period of 1 hour and 25 minutes. The complaint charges that the excess service of this crew was 1 hour, and it is claimed by defendant in its answer, and we will attempt to show, that said train was delayed for 4 hours 25 minutes on account of and by reason of the train breaking in two. That the break in two and the delay of 4 hours and 25 minutes was the result of a cause not known to the defendant or its officers or agents, or any of them, in charge of said train and in charge of the employes at the time it left Barstow, from which it started at 10 o'clock p. m. on October 21, and that the same was caused by an unavoidable accident and one that could not have been foreseen by the defendant, all of which facts were reported to the commission.

The service being admitted and the defenses relied on by the defendant being as set forth in the answer with the contents of which I have just acquainted you, it becomes incumbent upon defendant to prove to your satisfaction that it exercised, before starting either of these trains, all diligence which a reasonably prudent man with like knowledge and under like circumstances could exercise for the purpose of ascertaining and of knowing that the equipment placed in said trains was in such a condition as to give it no occasion to foresee that any of these breaks in two would occur. We will undertake to show that in accordance with the best custom and usage prevailing on well operated railroads throughout the United States, the equipment in each of such trains was adequately and properly inspected, and that in spite of such inspection the break in two thereafter appeared, and that by reason of the

fact that due diligence and foresight was exercised for the purpose of determining that the equipment was in proper condition to be moved—in a condition which would cause no reasonable person to anticipate that it would break in two—and that by reason of these facts stated, defendant has brought itself squarely within the language of the proviso found in section 3 of the act. We will further undertake to show that the equipment in each of these trains, including equipment which was broken in two, was, before it was permitted to start on its run, equipped in all respects in strict accord with the requirements of the various safety appliance acts and with the orders of the Interstate Commerce Commission promulgated pursuant to those acts; and because it is claimed in counts 1 to 6 that there was a delay by reason of the blowing out of a water valve on an engine known as No. 965, that such engine before it left Bakersfield was in a condition which complied in all respects with the requirements of the Interstate Commerce Commission promulgated pursuant to the boiler inspection act. In other words, we will undertake to show to the satisfaction of the jury by a preponderance of evidence that everything consistent with the practical operation of the railroad was done to enable it in each case to foresee whether or not any accident was liable to befall the trains, and that in spite of all these precautions the breaks in two occurred, and that the break in two were in each instance the results of causes that were not known and could not have been foreseen and of unavoidable accidents which no degree of human care or skill or foresight could have prevented.

In support of the affirmative defenses set up in its answer, the defendant, in addition to the facts heretofore mentioned, will endeavor to show that its system of railway extended from Chicago to the Pacific Coast and contains something over fourteen thousand miles, and is divided into certain operating divisions, the lines west of Albuquerque being operated from Los Angeles under what are known as the Coast Lines; that the lines of that system are operated in accordance with the best known custom and usage prevailing among well operated railroads throughout the United States, and that each of the three trains involved in this case were freight trains, which were handled in strict accord with the best known custom and usage prevailing among well operated railroads throughout the United States, in each instance with a view to avoiding delays to superior trains and to prevent crews of trains from being detained on duty in excess of 16 hours and with a view of avoiding violations on the part of the train crews in question of any of the federal laws, either with respect to safety appliances, hours of service, handling of live stock, operating with equipment which did not conform in all respects to the requirements of the Interstate Commerce Commission so far as engines are concerned—in other words, that every reasonable precaution known to expert railroad men was taken in the case of the three trains involved in this case for the purpose of avoiding excess service and then, after it became apparent that such service would be rendered necessary, to minimize the extent of that service in so far as it could be done. In other words, that in each case the operation of the three freight trains in

question was within the proviso found in section 3 of said hours of service act.

TESTIMONY APPLICABLE TO ALL COUNTS.

Defendant at the outset will produce certain testimony common to all the counts embraced in the complaint and will follow that general testimony with testimony relating to the specific sets of counts.

Testimony of John A. Christie.

John A. Christie testified on behalf of defendant:

My name is John A. Christie; I reside at Needles, California; and am division superintendent of The Atchison, Topeka and Santa Fe Railway Company, a corporation, operating as a common carrier of freight and passengers, railway lines throughout the United States. The lines of the Santa Fe System extend from Chicago to Los Angeles, San Francisco, Denver, Galveston and other places, and include a total mileage of approximately 12,000 miles. The system is divided into two grand divisions east of Albuquerque, while the lines west of Albuquerque are included in one division, known as the Coast Lines, which embrace between 2300 and 2400 miles. My jurisdiction extends from Seligman, Arizona, to Bakersfield, California, with several branches. The distance from Seligman to Needles is 149 miles, and from Needles to Barstow 169 miles, and from Barstow to Bakersfield 141 miles. The country between Bakersfield and Barstow is very sparsely populated, and the country traversed between Barstow and Needles is somewhat similar, though perhaps a little less sparsely populated

(Testimony of John A. Christie.)

than the other. The lines of my division are through mountains and desert territory, and the heaviest grade is (2.2%) between the points known as Caliente and Tehachapi. The line between Bakersfield and Mojave is operate under the direction of the Southern Pacific, and is its property. The Santa Fe operates over this district on a lease and contract and other agreements which cover it. The actual movement of trains over this piece of joint track is in the hands of the Southern Pacific Company from the time the train reaches Kern Junction until it arrives at Mojave, a distance of 68 miles. The country traversed by the joint track consists of heavy grades and is populated very sparsely. I have been engaged in the railroad business about 32 or 33 years and have been connected during that time with the Grand Trunk Lines, Chicago & Eastern Illinois and the Santa Fe Lines. I am fairly familiar with the custom and usage prevailing on all well operated railroads throughout the United States and consider that The Atchison, Topeka and Santa Fe Railway is a well operated railway as compared with other railroads throughout the United States, and that said railway is customarily and during the month of October, 1914, was a well managed railway and operated in accordance with the best known custom and usage prevailing among well operated railways throughout the United States. The elements which must be taken into consideration in the establishment of division terminals are water and grade conditions. Water is one of the important factors that regulate such things in a desert arid country, and grade condi-

(Testimony of John A. Christie.)

tions is another. These are the principal factors. In the distribution of terminals and the distance between such terminals the grade has as much to do with that as anything. There are times when it is necessary to establish a helper or short run service, and in other instances, where grades are favorable, you can make a division longer—or a district—as the case may be. Divisions are divided into districts, which are defined as between division terminals. The division over which I have charge is divided into what we know as the “first district” of the Arizona Division between Seligman and Needles; the “second district” is between Needles and Barstow, and the “third district” is between Barstow and Bakersfield. These districts include branches. The time consumed in traversing a given territory has a bearing on the establishment of division terminals. Customarily and ordinarily the usual and ordinary running time of a freight train between Needles and Barstow is 12 hours, which would just about be an average run from one terminal to the other, including the usual and ordinary allowance for delay. A freight train customarily and ordinarily, including the time usually consumed by reason of delays, taking water, waiting for other trains to pass, or delays incident to hot boxes, and other delays of a similar character, will ordinarily make a run between Needles and Barstow in 12 hours, while a train traveling in the opposite direction, between Barstow and Needles, the usual and ordinary time consumed, including all delays usually incident to the operation, would be just about the same, but a train traveling

(Testimony of John A. Christie.)

between Bakersfield and Barstow eastbound would occupy a little more time, as a rule, probably 12 hours and a half, because the single track which we occupy jointly with the Southern Pacific is carrying a heavy volume of business, which naturally results in some delays occasionally. Among well operated railways throughout the United States the class of trains which customarily and ordinarily is given precedence is passenger trains, which are the first consideration. In general handling eastbound passenger trains are given preference—trackage right—over the westbound passenger trains of the same class, depending, of course, on whether or not the trains are running as regular or extra, or whether or not by special order a given train is given special trackage rights. A superior train is given the trackage right over an inferior train going in the same direction, and according to our rules the inferior train must clear the main line for superior trains in the same direction as it must for superior trains moving in the opposite direction. With respect to inferior trains of the same class, those which are eastbound are given preference. The heaviest volume of high class freight is eastbound, and naturally would be given preference over freight of less significance or "dead freight."

I ran a locomotive for about 10 years. After that I was road foreman of engines, relieving roundhouse foreman, then in the joint capacity of road foreman of engines and trainmaster, then trainmaster exclusively, and later division superintendent.

Mr. Walter: I think the government will stipulate

(Testimony of John A. Christie.)

the qualifications of Mr. Christie to testify as an expert with respect to matters pertaining to railroad operation.

(Witness, continuing): I am thoroughly familiar with the construction of locomotives and with track maintenance. The effect upon traffic of a break in two of a train between stations upon single tracks is to form an obstruction that necessarily has to be cleared before traffic movement can be resumed. It suspends all traffic for a length of time that varies considerably. It depends upon the character of the break and its location between stations, and various other things have a bearing on it. When a break in two occurs, the first thing to do is to get the train coupled up, or if the break is of such a nature that it can not be handled expeditiously, to take a bad order car or cars, or whatever it is, to a sidetrack, and set them out. Then take the remaining portion and get them out of the way. In the meantime it is necessary, customarily and ordinarily, to exercise precaution with respect to the movement of other trains. In order to avoid casualty it is necessary to protect the rear end immediately—that is part of the train crew's business—in the opposite direction or direction they are going in. Their train orders specify explicitly what rights or authority they have to occupy the main track, and it may be necessary to send a flagman ahead before they make this movement. If any train in traveling a given direction fails to show at a time when it might reasonably be anticipated at the next telegraph office where its progress should be reported, it then becomes the immediate duty of the operator or chief dispatcher in

(Testimony of John A. Christie.)

charge of the movement of that train to commence a process of taking care of those tracks. The effect of a break in two of one train is to delay all other trains operating over the same division or district at the same time until the main line is cleared. The track between Kern Junction and Mojave is single track, as is also that between Mojave and Bakersfield. The track between Needles and Barstow is mostly single track, although there is double track in an easterly direction from Barstow for $9\frac{1}{2}$ miles to a place called Daggett. Then there is 128 miles of single track between Daggett and Goffs. With the exception of that part of the line on the second district between Barstow and Daggett and between Goffs and Needles, there is single track. Danby is between Barstow and Goffs. Mile post 691 is near and a short distance east of Ludlow. The first station east of Ludlow is Ash Hill. In the construction of locomotives arrangement is made for supplying sand by means of a receptacle built on the top of the boiler, known as a sand dome, from which pipes lead to each side of the engine, that will distribute sand on the rail in front of the driving wheels. The sand usually carried in the dome is distributed to the rail by means of an air blast. For use in these domes we endeavor to get a sharp sand, which is screened and dried thoroughly before it is used. I can't say from where the supply of sand for engines running out of Bakersfield is secured, but engines leaving Barstow procure their sand from out of the river bottom at Barstow. The sand thus secured is subjected to treatment or process of screening

(Testimony of John A. Christie.)

and drying before it can be used in the dome. In oil-burning engines they use sand for cleaning the flues, but this is not of a character which could be used in the dome unless it was screened and dried, for as placed in the engine it is not in a condition which would enable it to be used in the dome. The reasons why sand used in the dome must be dry and why care must be used to see that it conforms to certain standards are that in its passage from the dome to the rail it naturally has to pass through a small aperture, and has to be dry so that it will run freely. Any little pebble or little piece of wood or anything of that kind would stop the flow. In fact, a pebble the size of a pea would obstruct the flow, and it has to be dry because it will very quickly clog and destroy the usefulness of the appliance entirely. The sand in the dome is used to add adhesion to the driving wheels with the rail—to afford traction. The aperture through which sand must pass from the dome is probably less than a quarter of an inch, and the pipe through which the sand passes after leaving the aperture is about three-quarters or five-eighths of an inch. The sand is forced through the aperture and through the pipe onto the rail by means of compressed air, supplied by the engine. I am fairly well acquainted with the construction of freight cars. Crude oil is used for fuel on the engines operated over my division, and there is kept on hand at the division terminals a supply of that fuel for use on the engines operating from that terminal. The method usually and customarily resorted to upon my division for the purpose of testing freight

(Testimony of John A. Christie.)

trains before they are permitted to leave terminals, to determine whether or not the equipment in a train is in a condition to withstand the usual and ordinary shocks incident to the operation of such trains, are as follows: When the train arrives at the terminal it is inspected by a corps of men trained in that department, and such defects as they discover are made note of. On the outgoing movement the trains are again inspected. Before leaving, the train thus stretched is subjected to further examination. That is the instruction, and an employe who fails to comply with instructions in that regard will probably be disciplined to some extent. In almost every car there is more or less lost motion in the draw bar. It is taken up with springs and other devices, but the constant thrust and grab will work lost motion, and knuckles at times wear and show lost motion. On the arrival of the train at the terminal the brakes are set on the rear end and the engine pulls on the train and pulls the slack out and leaves everything in a position there to permit the inspector to detect any weaknesses or defects which may be existing here or there in the draft on the car. This is what we call in railroad parlance "stretching a train." Engines show a draw bar pull, as we call it, of from 30 to 75 thousand pounds, perhaps less than thirty with some of the little light engines, and perhaps some of the heavy modern engines would exceed 75,000 pounds of draw bar pull, but it would be sufficient to support or pull the tonnage rating of the engine. The tonnage rating of an engine depends upon its class and construction and the grades over which

(Testimony of John A. Christie.)

it operates. Engines of a given type would have one tonnage rating for one district and another tonnage rating for another district, depending upon the topography of the country traversed in that district. I have stated that there are two important factors which enter into the establishment of division terminals; one being water supply and the other grades. Those factors enter into the establishment of division terminal points in this way: A liberal supply of water is essential to a terminal on account of the vast consumption, and it would make it almost prohibitive to haul water to a terminal. The operating expense would not bear a burden of that kind. So far as grades are concerned, it is at times necessary to establish a terminal shorter than otherwise, on account of using helpers and short runs. In some particularly populated districts of the Santa Fe System and other railroads where short runs on freight and passengers are established, they have to establish terminals to take care of them. In addition to abundance of supply of water for division terminals there must also be an assurance of a continuance of such supply, and whether or not that supply exists is determined by experimentation before the establishment of the terminal. The division terminals upon my division, marking the ends of the districts on that division, are so situated that trains may customarily, usually and ordinarily, when you bear in mind the usual and ordinary delays incident to operation, safely traverse the district between division terminals within sixteen hours. The usual and ordinary percentage upon well operated railroads

(Testimony of John A. Christie.)

throughout the United States of break in two to trains would average about two per cent. in mountainous country, with heavy grades and other conditions. On the division over which I have charge we stand about one per cent., which is a good showing when compared with the performance of other well operated railroads throughout the United States, according to the best of my information, knowledge and belief. I believe that the percentage on my division is really lower than upon other railroads throughout the United States by probably one-half. Without having access to the records of other railroads, I wouldn't know very well, but I think, as a practical railroad man, that the fixed ratio which would usually exist when applied to all railroads throughout the United States, of 2 per cent. in mountainous country and heavy grades and other conditions, would not be bad. As a practical man, acquainted with the operation of other roads, I believe that in the management of my division we have succeeded in reducing the breaks in two on that division to at least one-half of what might usually and ordinarily be expected. Of course, my predecessor accomplished good work in establishing this record. The division terminals at Needles, Barstow and Bakersfield have been established for a time beyond my memory. I believe from the construction of the railroad in 1881 Needles was established. Barstow, I presume, about the same time, and Bakersfield long prior to that for the Southern Pacific line, and for the Santa Fe in 1900, when I believe it started operating through that territory. During all the period of my experience on the Santa Fe

(Testimony of John A. Christie.)

on the district on which I have been working, those division terminals have been so established as that they would in the ordinary and usual course of business, making due allowance for all the usual and ordinary delays incident to operation, enable trains to pass from one division terminal to another with ample time within the sixteen hour period. I am reasonably familiar with the average number of trains which are usually and ordinarily operated over the second district of my division between Barstow and Needles. The average number of trains which is daily operated over that district, including the trains operated in both directions, fluctuates a great deal, depending on the volume of traffic moving, but at the present time there are about 18 freight trains and 12 passenger trains. Between Barstow and Bakersfield the number is somewhat less, probably 10 freight trains and 6 passenger trains—Santa Fe trains exclusively—the Southern Pacific business probably equals that of the Santa Fe over this joint track portion. There are $9\frac{1}{2}$ miles of track on my division between Daggett and Barstow where the Salt Lake line handles trains over joint track, and my estimate does not include Salt Lake trains.

Cross-Examination.

When I said that the percentage of break in twos on my division was about 1 per cent. I meant that we have one break in two for every 100 trains. When I refer to 18 freight trains and 12 passenger trains on the second district that means that number of trains in all, going in both directions. It should be under-

(Testimony of John A. Christie.)

stood that there are times when there would be 5 or 6 sections of one passenger train, and the next day perhaps 3, the number fluctuates a great deal and probably doubles itself some days. I think Needles was established as a terminal about the year 1881, and Barstow just about the same time. That was before my time, and is just from my memory of the records. The Santa Fe made Bakersfield a terminal in 1900.

Testimony of Herbert S. Wall.

Herbert S. Wall testified on behalf of defendant.

Direct Examination.

My occupation is shop superintendent of defendant at San Bernardino. I have been engaged in that capacity for 7 years. Previous to that time I was master mechanic of the Arizona Division. I have been engaged in the railroad business for 22 years. I served my apprenticeship on the Colorado & Southern, and then went to the Kansas City Southern, and from there to the Union Pacific, and from there to the Santa Fe in 1901 in Albuquerque. During that period I have worked in the capacities of machinist, gang foreman, machine foreman, inspector, general foreman, roundhouse foreman, division foreman, master mechanic and shop superintendent. As shop superintendent my duty consists of overseeing the mechanical repairs of locomotives and cars, and I am responsible for the manufacturing of material and of repairs for cars and car equipment. The methods usually and habitually employed by the Santa Fe for the purpose of determining whether or not motive power is in all

(Testimony of Herbert S. Wall.)

respects sufficient and maintained in accordance with the requirements promulgated by the Interstate Commerce Commission are as follows: We start in taking an engine through the shops for general overhauling, stripping and inspecting and making the inspection by heating and with magnifying glasses on certain parts, living up to the limited sizes of different parts and living up to the life of service on parts which is determined by size being reduced from ordinary size of new material to the reduced size. I can explain that in this way: If a journal is 11 inches and that journal is constantly drawn by power, 10½ inches, it would be removed on account of its axle load being reduced. The same way with the question of life of mileage. After a certain amount of mileage and use crystallization takes place and it is removed on that account. Taking the engine through our boiler inspection we strip the boiler completely and scale and test all parts. We employ a competent man as inspector in the shops, who does nothing but get in and around every particle of the boiler in the way of the different parts. After the boiler is ready it is tested under a factor of safety of 25 per cent. over steam pressure or the pressure that the steam gauges or working pressure will be set to. If the steam pressure is put at 220 pounds the cold water test of a degree of 90 is made at 285 pounds. Then the engine is assembled, the cylinders being inspected and tested by water pressure for cracks, all bolts considered defective on test are removed and the holes reamed out and everything generally overhauled by the different departments. After

(Testimony of Herbert S. Wall.)

this is completed ready for the firing line, it is turned over to a general inspector, who again tests it before it is permitted to go into service. All engines are not only tested out according to the federal requirements, both under machinery and boiler inspection, but it is also tested according to the Santa Fe specifications and boiler rules and locomotive tests, which are 20 per cent. more rigid than the federal requirements. The engine is put under a steam pressure test and, as far as the boiler is concerned, with two inches of water in the glasses, all injectors shut off. We positively assure ourselves that the boiler pressure could not be built up over the ordinary working pressure and not be released by the "pop." If it is found that two pops won't release the boiler under forced fire, we apply the third pop. The engine is taken out, then put on a trial trip and run a hundred miles or more for a period of about ten hours. A report is made by the engineer who passes the examining board, consisting of 3 road foremen, and that report is handled by the shop force. Then the engine is turned over to the master mechanic of the division for service upon the division to which it is assigned. After these tests an engine which is turned out of the shop is in a condition which would cause me as a practical railroad man to feel that it can be relied upon to carry its tonnage rating. Our engines will not only carry the tonnage rating on being turned out of the shop in first class condition, but are shopped in condition to handle the tonnage. After the general overhauling of our engines they come out of the shop in condition to handle their

(Testimony of Herbert S. Wall.)

tonnage. After receiving such a general overhauling in the roundhouse, there are certain rules of inspection in the roundhouse at the different terminals. The mechanical department is paying from ten to fifteen thousand dollars a month in labor to keep the engines in serviceable condition. After an engine is overhauled at the time set for it to be overhauled according to its mileage, it is tested out in the roundhouse while under the jurisdiction of the master mechanic, after which it receives attention each trip. The inspection is just as serious and just as important in the terminal at the end of each trip as it is at the back shop. The tonnage rating of an engine is the tonnage that is figured out by the test department with a dynamo-meter car and figured out on the different engines, 1050 tons out of Needles, that is the rating for a certain class of engines with certain size cylinders and of a certain weight. According to the different classes of engines, according to their weight and the size of their cylinders, you have to have different ratings for tonnage in different territories. I am familiar with the practice and methods prevailing upon well operated railroads with which I have been associated throughout the United States for the purpose of determining the sufficiency of their equipment. I do not know of any railroad that follows up the latest knowledge and general railroad practice more than the Santa Fe. Its equipment is customarily and ordinarily kept in a condition which is 20% more efficient than the federal requirements, according to the form of boiler inspection laid down by our boiler department

(Testimony of Herbert S. Wall.)

and according to our machinery inspection. Rules have already been laid down with the consent of the Interstate Commerce Commission pursuant to the boiler inspection act of February 17, 1911, and approved by the commission, but our system rules require 20 per cent. more than do the rules of the commission. By the terms of the boiler inspection act of 1911 the railway companies are authorized and empowered to submit to the Interstate Commerce Commission for its approval certain rules for the determination of the sufficiency of motive power, and those rules were submitted, but in addition to the requirements of those rules there prevails on the Santa Fe System other and additional rules providing other and additional requirements which are 20 per cent. more rigid. I am familiar with the type and character of locomotives used upon the division operated by Mr. Christie and have taken care of overhauling them. All motive power from Mr. Christie's division is sent to me for overhauling at San Bernardino shops. Engines of the 900 class are what are known as tandem compounds having a high and low pressure cylinder, weighing about 287,000 pounds, carrying steam pressure of 220 pounds. A compound feature is to use the live steam into the low pressure cylinder after it is exhausted—to go into the cylinder at about 220 pounds. It is exhausted from the high into the low at a figure of about 79. It is then turned into the low pressure cylinder and exhausted to the atmosphere—that is in compounds. In simple engines 40 per cent. of power is increased by opening valve of $1\frac{1}{4}$ inch and emitting

(Testimony of Herbert S. Wall.)

live steam into the low pressure cylinder. After the live steam has been used again in the low pressure cylinder of an engine of the 900 class, it is of no further use and goes through the stack to the atmosphere at between 18 and 22 pounds, for it is of no further utility except for cutting the fire and assisting in forming draughts. Engines of the 900 class have five pair of drivers with a trailer. The usual and ordinary capacity of the sand dome for the 900 class of engines is about 3 or $3\frac{1}{2}$ cubic yards. We have smaller engines that will only hold a yard and a half. The tonnage rating of a 900 engine differs according to the different districts to which it is assigned. The capacity of the sand dome of any engine is fixed according to what experience has shown to be the usual and immediate sand requirement of the engine, and it is about 50 per cent. more than is generally required. The sand used in the dome in engines leaving Bakersfield is obtained from somewhere around Fresno, I think, but I am not quite sure. Mr. Walker, superintendent of the Valley division, furnishes sand for that territory. The treatment to which sand is subjected before it is put into the dome of the engine is about as follows: We try to obtain as much as possible a sharp, coarse sand. It is hauled to our sand houses and put in a steam drier; then it is screened through a fine netting so that the particles that pass through are like fine shot. We can not use any wet sand in the dome for the reason that it will stop up our sand ports when delivering it through the pipe to the rail on account of its having an opening slightly

(Testimony of Herbert S. Wall.)

over 3/16ths of an inch; sand is delivered to the rail by a system of pipe leading from the sand dome, and it is blown through the pipes by air, different sanders being used according to what the railroad adopts. The sand pipe is supposed to be within 5½ inches from the wheel and 3½ inches of the rail, and it is maintained at that point as much as possible. The effect of placing less carefully prepared sand in the dome would be to render the sander inoperative on account of being stopped. The draw bars on engines are maintained under my supervision, and they are customarily and ordinarily maintained in strict compliance with all the requirements of the safety appliance act. Engines operated are under the supervision of the roundhouse inspector, who checks grab irons and draw bars and pins and knuckles. Each one of the inspectors is a competent man. They are mechanics selected from the engineer force. The draw bar is supposed to be maintained at a certain height and centre as fixed by the specification under the safety appliance act promulgated by the Interstate Commerce Commission. The grab irons and operating levers are gauged by the roundhouse inspectors and also by the crews and a general check is made on the safety appliance equipment of locomotives at the end of each trip as well as inspection of the other cars. A failure to comply with the requirements of the Interstate Commerce Commission means a penalty. The draw bar or drawhead, as it is sometimes called, on an engine or locomotive must possess a certain tensile strength. We are now using the Sharon couplers, of which that is a correct model

(Testimony of Herbert S. Wall.)

of the type used as a locomotive coupler. The other model is a correct model of the coupler ordinarily used on the varied freight equipment known as the R. E. Janney coupler. The tensile strength of these draw bars on engines is determined by their being tested out to a certain contract by the manufacturers. I believe they have got to test up to 210,000 pounds, and I believe that that same test is applied to couplers of the same type used upon freight cars. A train is no stronger than its weakest draw bar. Take lots of our trains, according to the service they get, by reason of engines slipping and other things, would break any kind of an arrangement we could put in and overcome the tensile strength of the draw bar. Upon the Santa Fe lines under my jurisdiction there prevails all of the methods known to well operated railroads throughout the United States for the purpose of detecting whether or not the equipment of its locomotives, cars and other appliances are strong and sufficient. All of this is figured out by the master car builders' association. They figure on getting the very best material and attachments to withstand the service. I believe that many of the requirements of the Interstate Commerce Commission are based upon the recommendation and the rules adopted by the Master Car Builder's Association. Car inspectors are maintained on Mr. Christie's division under the supervision of Mr. Armstrong, master mechanic of that division, who is not in my department. I am familiar with the methods usually resorted to by car inspectors for the purpose of determining whether or not equipment complies with

(Testimony of Herbert S. Wall.)

all the requirements of the Safety Appliance Act. Such methods consist of testing draw bars, looking cars over and journals and grab irons and safety appliances, defective wheels, defective flanges, shelled out spots in wheels, and roof conditions, testing air and taking up leaks and defects. On an engine of the 900 class a crack in the saddle in the exhaust part in the low pressure cylinder would not tend to cause a water valve to blow out. It would have nothing to do with the removing of the water valve. Assuming that a crack of the nature just described should exist, and which would admit of the escape of some steam, it would not affect the pulling power of that engine because the steam has had the value all taken out of it. It has been put to all of the uses of which it is capable. There is from 18 to 22 pounds after it comes to the atmosphere, and there is no more value for it to perform after it goes through the final exhaust so far as power is concerned and a crack in the saddle would not cause or tend in any way to cause the blowing out of the water valve. The water valve is in the back of the low pressure cylinder. They are all removed now and plugged and we no longer use the water valve, which was there in the first place to take care of any over pressure in the cylinder which might do damage. As the engine is exhausting it is relieving the pressure from any part of that cylinder instead of increasing it. A condition such as I have described would be more apt to blow out a water plug than it would a water valve. The effect of blowing out a water plug in an engine of the 900 type would

(Testimony of Herbert S. Wall.)

be to leave an opening there of about 2 inches which would reduce the power of that portion of the cylinder. I would say it would lower the effective force of an engine possibly 20 per cent, but the engine would still be capable of hauling 80 per cent of its tonnage rating. It would not be customary to operate an engine with a water valve blown out, as always extra parts accompany the engine which would repair and plug up that hole or opening, but if there were no extra parts about the engine or if the plug was broken off in such way that it could not be gotten out, that would not prevent the engine being used to the terminal, for our engineers resort to plugging that with some form of wood or in some way to proceed, possibly with a little delay. When I refer to the J. E. Janney coupler being tested to 210,000 pounds, I meant that the tensile strength of the material of the draw bar is 210,000 to the square inch.

Cross-Examination.

I mean the tensile of the strength of the draw bar will stand that much pull; that refers only to the strength of the draw bar itself, and in no way refers to the amount of pull that the attachment fastening the draw bar into the car will pull. The attachment is figured out to stand an ordinary strain of service. We take the dynamometer car when it is pulling steady at a thousand tons, and your draw bar with the attachment of the draft rigging will vary from 65 to 75 or 85 thousand pounds. Of course, that comes up just for the time being, I am just taking that in connection with our dynamometer car next to the

(Testimony of Herbert S. Wall.)

engine hauling a load of a thousand tons. Draw bars are fastened into the ends of cars by means of springs and sheet plate, follower plate and spring. Most of them have been done away with, but some have a stem or a continuous rod to both ends of the car. The R. E. Janney coupler is fastened into the end of the car with the yoke that is riveted onto the draw bar and springs and follower plate and the draft timber lug and the draft timbers bolted to the center sills of the car. The draft timbers are bolted in some cases, but where there is steel equipment it is put in by a different system. If an engine slips there are times when a draw bar will break off in the eye of the coupler. There are times when it will snap off right back of the head and there are times when it will break off in other locations. The casting might have a flaw and naturally the weakest part of the draw bar would break. It does not always break in the same place. At different times bolts will break. Sometimes the top of the yoke will break and permit it to spread. The yoke bolt or rivet is in there primarily to keep the yoke from spreading and pulled down—but still there is a certain amount of strain put on the bolt as well as the lift. The shoulder of the yoke takes a certain amount of pressure. It is often true that there are yoke bolts when there is no lift at all and the force is expended on the yoke bolts themselves. If the coupler is not fitted up so the yoke fits on the shoulder, then all of the strain will be on the yoke bolts or rivets. R. E. Janney couplers are supposed to be fitted with a lip. We use the inch and a quarter

(Testimony of Herbert S. Wall.)

and inch and three-eighths rivets. We are now putting in the larger rivet and removing the smaller rivet. Those rivets extend through the shank of the draw bar. As master mechanic in charge of the back shop at San Bernardino, I have to deal with everything complete in the general overhauling, everything pertaining to the steaming power of engines and with every part of the engine. I do not personally inspect all engines that come in there. I have an organization. The inspection is not left to any one individual. The organization in the locomotive department consists of a general foreman, a general erecting foreman, a general machine foreman, and a general boiler foreman and the boiler inspector, who devotes his entire time to living up to the required federal inspection, as well as the machinery inspector, who devotes his entire time to living up to the machinery inspection. Then that all is divided into different gangs and is worked out by the heads of the different departments. There are a good many officials who have to do with the inspection and repair of engines. The machine foreman has to do with the repairs and the blacksmith foreman would have to do with the parts to be repaired in the blacksmith shop, but the final completion or assembling of the engine is under the supervision of the general erecting foreman and the general inspector, who is final on the condition of the engine. Not to any extent are particular parts overlooked or repairs not made that should have been made under the orders of the company. There are times when there are oversights in my department as well as in

(Testimony of Herbert S. Wall.)

other ones. As distinguished from a water plug, a water valve is screwed into the cylinder head with a spring and cap and a little seat and an adjusting screw, which is set at a certain pressure. Whenever the pressure is built up over the setting of that spring that will relieve the pressure in the cylinder to avoid damage. All of the water valves are now taken out and a solid plug is put in and the cylinder cock arrangement is arranged to relieve the cylinder by a system of valves and operating rods. The water valves are put in in addition to the cylinder cocks. The water valve is located in the cylinder and it is to take care of water conditions. The purpose of the water plug is to relieve any over pressure built up in the cylinder. It might be dangerous in damaging the cylinder on account of over-pressure. The water valve will open up when the pressure in the cylinder is more than the compression on the spring. That pushes it back and releases that pressure in the portion of the cylinder until the pressure is released beyond the set of the spring, and then it closes again. But we found there was so very little value in that that we put in the solid plug. When we put in the solid plug it did away with the effectiveness of the valve, for we removed the valve and plugged the hole solid with a plug screwed in the cylinder by means of thread. The plug is never used for the purpose of taking out and cleaning out the cylinder. We had 4 water plugs in the cylinders of the compound and that was about the only engine we used them on. All of the engines have two cylinder cocks for each cylinder, forward and

(Testimony of Herbert S. Wall.)

back, according to the stroke of the piston. In my opinion they had the solid plug in compound engines during the year 1914. There is no rule with respect to the inspection of plug which is screwed in there solid and there would be no way of making an inspection without taking the plug out; and as I say as a usual thing we didn't do that. The escape of steam due to a crack in the saddle would not affect the power of the engine. The effect on the engine of a very bad crack in the saddle would be that steam might possibly blow down and come up in under the cylinder, and in cold or heavy weather or heavy atmosphere it might assist in obstructing the view of the engineer, but it would have to be a pretty large crack or serious break to do that on account of the light pressure at which exhausted steam comes out at the cylinder. It would permit steam to go down toward the underneath part of the engine, but I don't think it would affect the rails because it is about 17 or 19½ inches from where that opening would be to a point over the rail. Any steam or water escaping through a cracked saddle would go down straight through a small channel. It is the same as coming right down through the pipe and working right straight down to the roadbed. There is never enough pressure to cause steam to spread out when it strikes the atmosphere, and it would spread through the atmosphere or be carried by the wind and if after it strikes the atmosphere it spreads and shows dampness in all directions that would have no effect at all in causing the engine to slip because a steam leak such as you are alluding to

(Testimony of Herbert S. Wall.)

would be ahead of the sand pipe, about 4 or 5 feet, and consequently would have no communication with the sand that goes on the rail in the way of dampening the sand or blowing it off and, while dampness might get on the rail regardless of the sand there would not be any more than the ordinary moisture and the sand would be between that moisture and the wheels, but I don't think the moisture would get on the rail. A crack in the exhaust channel such as I have described would be about 18 inches out of the line of the rail and about 3 or 3½ feet above the rail. After exhaust steam passes by such a crack it goes to the final exhaust through the stack, and under such conditions I do not think it likely that water or steam would be thrown over the rail even if the crack were heavy. I think it would not be possible for the reason that there is a large opening to relieve that exhaust and there would have to be some back pressure which would drive that steam through the crack under pressure. There might be some leakage which would show up in cold or heavy weather, but not in fair or warm weather, but I don't think you would notice it, and I don't think that at any time there would be enough leakage to cause any reduction in the traction force of the engine. The atmospheric conditions in cold weather will always show up a steam leak, more than on a clear warm day.

Redirect Examination.

I am familiar with the condition of defendant's engine No. 965, mentioned in counts 1 to 6 inclusive. The first time that engine was in my shop for general

(Testimony of Herbert S. Wall.)

overhauling was on June 6, 1914, and it was put in service August 7, 1914. During the time that engine was in the shop \$4,995.00 was expended in putting her into shape and she was given the minute inspection such as I have detailed—a thorough overhauling, and at the time she was turned out of the shop she conformed absolutely in all respects to all requirements of the Interstate Commerce Commission under the safety appliance acts and under the boiler inspection act, and under the other orders, rules and regulations of the Interstate Commerce Commission.

The Court: When did you say she was shopped?

A. On June 6, 1914, to August 7, 1914.

Q. When was this delay?

Mr. Burks: On October 4, 1914.

(Witness continuing): At the time she was turned out of the shop engine No. 965 was in a condition to haul her tonnage rating, and there was nothing which would cause me or any member of my organization to foresee that she would encounter any mishaps. The engine was as near perfect according to our system of inspection and doing work as we could make it. And, according to the work report of the engineer that broke the engine and the engineer that took the tonnage train from San Bernardino to Barstow, the return working report from Barstow would indicate that the engine was in good condition and wanted by the master mechanic of that division. I am familiar in a general way with the requirements of the Interstate Commerce Commission under the boiler inspec-

(Testimony of Herbert S. Wall.)

tion act as well as with the system of rules and regulations thereunder.

“Q. I will ask you to state whether or not it is customary and usual among well operated railroad throughout the United States to use in interstate commerce engines from which some steam escapes, so long as there is not a sufficient quantity escaping therefrom to obscure the vision of the engine men?

A. There is a certain amount of steam leak out of any service from terminal to terminal on nearly any power that has been operated on any road that I have been connected with. But these steam leaks are not permitted of any kind to come out of terminals. More especially, it is not the practice to permit any engine to leave the terminals with any steam leaks that will obscure the vision of the crew.”

The test is as to whether there is a sufficient quantity escaping to obscure the vision of the enginemen. I have in my office files a certified copy of the circular issued by the Interstate Commerce Commission containing the rules agreed upon by the railroads and promulgated by the commission pursuant to the Boiler Inspection Act, but I haven't it here. When I referred to the yoke rivets used by the Santa Fe as “our bolts” I meant that the yoke bolts or rivets in use by the Santa Fe are of a different character from those used by other railroads whose cars come onto its lines. If I referred to “bolts” I was in error. I want to correct that to rivets. We use $1\frac{1}{4}$ to $1\frac{3}{8}$ rivets in the regular form of a rivet made of good iron.

(Testimony of Herbert S. Wall.)

Recross-Examination.

In case there would be a leak in the saddle on the left side between the frame and center, the steam and water will escape downward and then if it did not disappear, if it was such a leak as not to disappear when it was going down, the steam would pass up possibly under the cylinder or follow out under the engine. I couldn't say just exactly what direction it would take, but I don't think it would be any more liable to take the direction of the rail than any other direction. If it was a bad enough leak it is possible that it would take the direction of the rail, but not more than any other direction. The live steam pipe comes down in front of the saddle and connects with the high pressure cylinder. In case there should be a leak in the steam pipe it would follow in the same direction as to exhaust cavity in the saddle. If it should be a bad break in the steam pipe the steam and water would not reach the rail of the track because the steam pipe is connected up about 4 feet, and, as a usual thing, the steam is dry, and my personal opinion is that it would never touch the rail because it would blow up. Of course, you would have no steam leak in that pipe you refer to if it was not moving, but if the engine was moving the chances are the steam would go back in the opposite direction to what the engine was moving. If that steam leak was underneath the pipe then naturally it would go down to the ground. If it was ahead of the pipe it would go ahead or in either direction. If the steam pipe should be leaking very badly and there should be a big leak in

(Testimony of Herbert S. Wall.)

the saddle on the left-hand side between the frame and the center of the saddle and the water should be coming down in large volumes then there would be a possibility of water getting on the rail, but not any more than any other direction. When engine No. 965 left the shop on August 7, as far as we know from our inspection, and according to the work report of the engineer who broke that engine in, and the work report of the engineer who delivered the engine to Barstow under tonnage, it was in perfect condition when it left the shop. That work report is in my files if you want to see it. My statement as to the condition of engine No. 965 when it left the shop on August 7, 1914, was based upon the report furnished me by me inspector and O. K.'d by the general foreman, the roundhouse inspector, and the engineer that broke the engine in and the engineer that delivered the engine to Barstow. My personal knowledge is from looking at the engine from time to time; it is not my practice to look into every little detail of every engine that passes through my shop and by making light inspection of the engine as she was delivered to the roundhouse. The day the engine was turned over to the roundhouse off of the firing line I did not make a general inspection, but an outside inspection was made by the general foreman and myself, in August, after it had been repaired. We would go over as far as I am concerned and check up the card—the number 1 and number 3 cards that are sworn to before a notary public by the boiler inspector and the general inspector of the outside parts of the engine

(Testimony of Herbert S. Wall.)

by walking around it. Now, understand me the inspection I made is just a light inspection. I do not make a thorough inspection of every part of an engine as it is being assembled because I couldn't carry it. I have got to rely on the organization to carry that inspection. Then I get the general result and the general condition of the engine leaving the shop by the service it performs by keeping in touch with the master mechanic who will keep in touch with the reports from the road foreman. That is the way that knowledge comes back to me mostly. My statement with respect to the condition of the engine at the time it went out of the shop on August 7 was based entirely on information received from these various reports and cards handed to me by my organization.

Redirect Examination

From my personal inspection and from the reports made to me I derive my knowledge of the condition of the 965 to which I testified. I do not want to lead you to believe that I inspected every engine personally that comes out of the shop. I have got to rely on my organization. But I inspect as many as I can with light inspection and I would not like to say that engine No. 965 was overhauled absolutely and inspected under my personal supervision and inspection. But it is overhauled and handled and inspected according to the service along with the routine of other engines by the different department foremen, which is the only way I have, and by verifying the system of reports and thereafter receive a written report, called

(Testimony of Herbert S. Wall.)

my 1600, from Mr. Gallaher, general foreman, as to the work which had been done on that engine. I have not that report here. It is just a general report giving the cost, but I have a final report sent to me by Mr. Armstrong, master mechanic of the Arizona division, accepting this engine with a few minor jobs that had to be done, which was nothing but running reports taken care of at the terminals, which indicate that the engine and her tonnage was accepted in perfect condition. This report is contained in a letter from Mr. Armstrong, master mechanic of the Arizona division, to whom this engine was delivered for service, stating the condition in which the engine was received at Barstow. That letter was written by Mr. A. G. Armstrong, master mechanic of the Arizona division, to me—H. S. Wall, superintendent of shops, at San Bernardino—and it contains information given by Mr. Armstrong to me. It is Mr. Armstrong's statement or report, made in the regular course of business of the company. Mr. Armstrong was the man to whom I sent this engine. He is the man who is responsible for the power of that division—all three districts. He writes his acceptance of the power as it is delivered to his territory from the shop superintendent, and that is detail work that is not taken up with Mr. Bean's office. It is simply a personal regulation that I made requiring the different master mechanics to write me on receipt of the engine at the various terminals so that I will have a check on the power and tonnage. The company does not necessarily require that, but it is for my information and this report

(Testimony of Herbert S. Wall.)

is made by the engineer who handles the engine under tonnage from San Bernardino to Barstow. He writes it to me. The man who handles the engine or delivers it, or operates it, makes, what is called, an engineer's report, and Armstrong got his information from the engineer's work report to him, which is taken off the work report book at Barstow. The information contained in the letter Armstrong wrote to me and in which he makes certain statements, is obtained from the work report book at the Barstow roundhouse, and that report was made by the engineer that delivered the engine from San Bernardino to Barstow. That is the engineer's report and I mean that Mr. Armstrong copied it from the engineer's report into this letter and sent it to me and gave me the information which is copied off of the engineer's report.

Recross-Examination.

It is my usual procedure when I am in San Bernardino with the general foreman to go around all shop engines before they are sent on trial trips and after the work that is reported after the trial trip before the engine is delivered from the roundhouse at San Bernardino. Now, I cannot do that on all engines, because there are times when I am not at San Bernardino. I make it my business to do that as much as possible. I was in San Bernardino on August 7, and, according to my usual procedure, I inspected engine No. 965 before it left, under the regular procedure in business, but I don't want to say positively that I did as I don't know positively that I inspected that engine personally.

(Testimony of Herbert S. Wall.)

Redirect Examination.

I know absolutely that engine 965 was inspected by 4 different representatives of my organization before it left my custody, because by the system of inspection that I have between my inspector and round-house inspector, and general foreman and general erecting foreman, I absolutely know of my own knowledge that they made that inspection, as it is done according to orders. I did not see them make the inspection, but they made the inspection if they followed my orders and instructions, and I have every reason to believe that they followed it. I cannot say that I know that my instructions were followed any more than that is the usual procedure and I have convinced myself enough in noticing them coming out of the shop that the organization does fully follow out the instructions, but I was not with them personally and, therefore, do not know personally that they inspected it.

I spoke yesterday of the work which was done upon engine 965 before it was turned out of the shops in August, 1914. I have here a report showing all work done upon that engine and the cost thereof, which is what is termed the 1160 report which the master mechanic makes out, showing the items by groups of work to be performed on the locomotive, giving an estimate of cost of labor and material plus overhead charges. That estimate is passed to me to pass on after the engine is stripped, or passing through the shop to make the final. We have, of course, a leeway on the difference between the final cost and the

(Testimony of Herbert S. Wall.)

estimate. This 1160 report is accompanied then by the 2509 to the office of Mr. Bean, our mechanical superintendent, after being accepted by me; it is then passed to our assistant to the Vice-President Mr. Purcell for approval to expend the amount of money on that engine. Everything is included in this report, covering a general overhauling; the engine is stripped entirely to the frames, cylinders and boiler, which is intact, and when the approval comes back we proceed with the repairs and we make the final. The estimate on engine 965 is \$4999, the figures I gave you yesterday, and the final figure is \$6,005.47, which means that all parts of that locomotive received attention and general repairs and was put in first class condition, or equal to new power started by the manufacturers, and absolutely, as near as it can be made, a perfect engine, at a total cost of over \$6000.00.

Testimony of C. D. Buzzell.

C. D. Buzzell testified on behalf of defendant:

My name is C. D. Buzzell. I am general foreman of the car department of the Atchison, Topeka and Santa Fe Railway Company at San Bernardino, and have been engaged in the employ of that company for 17½ years. Previous to that time I had other railroad service, with the Burlington, and with the Wisconsin Central. I am a member of the Master Car Builders' Association, which is formed for the interchange of cars and business over the United States and Canada, to prescribe certain standards and specifications for different parts of equipment and to

(Testimony of C. D. Buzzell.)

facilitate the movement of cars in interchange. The nature of my duties is to look after the repairing of cars of all classes, see that they conform to standards, and that they are in the proper physical condition to safely carry their lading to destination. The standards we maintain in securing that efficiency in equipment are prescribed by the Master Car Builders' Association and by the Interstate Commerce Commission relative to certain features pertaining to safety devices. For the purpose of maintaining equipment in accordance with those prescribed standards a corps of skilled labor is maintained; information is furnished them, and certain rules and regulations govern the inspection and repair of all equipment. The manner in which I repair cars, the source from which cars are received and my duties with respect to them are as follows: Cars are inspected by skilled men, defects found thereon are chalk-marked and written on; if the car is not in a fit physical condition it is marked "Bad Order." In addition to that a card is placed on the car stating briefly some of the repairs, or all of them, that are necessary to be made. This precludes any possibility of the car being taken out of the terminal until such repairs have been made, either by sending it to the shop or being repaired while in the train yard, if the defects are of a small nature. Upon the "bad order" card which I mentioned are written the initials, class of car, date, sent to the shop, time placed, time repaired, load or empty, and a line for defects; also information, if received from another road, engine number, and train

(Testimony of C. D. Buzzell.)

number. In connection with my work we also have car inspectors in the train yard and they are required to make in connection with their duties a report in each case where a car is received, and, upon inspection, is found to be in bad condition. Whenever the car is loaded they immediately report to the yard clerk and the yardmaster's office that this car is "Bad Order" and in need of repairs, and in pursuance of such report the car is then immediately set on the repair tracks to receive such repairs as are necessary to make it safe to carry the lading or to comply with interstate laws, by which I mean that there are a great many defects in interstate traffic that may exist which are in violation of the Safety Appliance Acts. Any of these defects must be repaired before a car is allowed to leave the terminal. My experience on other railroads and that of the defendant company covers a period of 28 years, during which time I have observed the practices of other railroads in connection with the inspection of cars and equipment along the lines to which I have testified, and have familiarized myself with the requirements of the Interstate Commerce Commission and the laws bearing upon the subject of safety appliances and equipment, as well as with the recommendations of the Master Car Builders' Association. As to the practices of the defendant company with respect to its inspection of cars and equipment received by it and used by the company in its business as compared with those of other companies the inspections of cars on all roads are very similar. Relative to safety appliances there is no

(Testimony of C. D. Buzzell.)

difference whatever in the *in*-inspections, but on mountainous roads the inspection is more severe than in level territory, for the reason that cars have to be in better physical condition to withstand the strains that they are subjected to in ascending and descending the mountainous grades and being handled by heavy power; and especially in this territory of the Santa Fe, or in territories of other roads where mountain grades enter into the handling of traffic, the inspection of cars is much more rigid than in a level or water-grade district. As an experienced railroad man I will say that there has never been any better method devised for the purpose of connecting up trains and hauling them than by means of the draw bar, and so far as tests have been able to determine, there is no superior method. The safety appliance laws require the use of draw bars and that the cars shall be equipped with draw bars and automatic couplers and shall couple automatically by impact and may be uncoupled without the necessity of men going between the cars. The draw bars customarily and ordinarily used by the Santa Fe defendant railway company conform in all respects to the provisions of the safety appliance acts and those draw bars are customarily and ordinarily applied in strict accordance with the requirements of those acts, and when they are kept in proper condition they conform to the statutes.

Cross-Examination.

The system followed by defendant company as to inspection precludes the possibility of cars leaving terminals in a defective condition as far as is possible with

(Testimony of C. D. Buzzell.)

the human element entering into it. It is possible that in cases cars get away from the terminal without having had the proper inspection. Cars ascending and descending mountainous grades must be subjected to a more rigid inspection than cars used in a level country on account of additional force and strain being placed upon them to handle them over grades. I can best explain why greater force is used in the handling of cars over mountainous grades in this manner—you can take any vehicle and roll it along on a level floor or track, as the case may be, with a great deal more ease than you can do it by pushing it up hill. In case an engine has practically its full rating on a hill, and there is some trouble in starting the engine, the train is at times subjected to greater strain than at others, and that is liable to result in breaking the train in two because of the strain—it is harder to start a train on a grade than it is on a level piece of track, and an engine is more liable to slip in starting the train. The effect of the slipping of the engine on a train is very hard on the couplers—on the coupling of cars and it is more liable to break them out, and in case there are two engines pulling the train up hill there is greater liability under those conditions because a helper engine is usually cut in in the middle of the train, and if the helper engine slips, that throws an undue strain on the train on account of the head engine working steam and a quick shock being distributed over the train on account of the second engine slipping, for it causes a very sudden jerk on the equipment entirely through the train

(Testimony of C. D. Buzzell.)

and the same is true in case the regular engine slips instead of the helper engine. The method followed in starting trains on the hills where the engines have almost their entire rating and a helper engine being used is that the rails are sanded to help eliminate any possibility of their slipping. In case of a compound engine, where they have a high and low pressure cylinder, live steam is used in the large or low pressure cylinder to a certain extent, but very slightly, as that balances the engine and makes it work—starts a train easier where it has good traction and gives it more power, and at the same time it gives power easier without the possibility of a jerk. The purpose of the compounding of an engine is to get more power out of a given amount of steam for the purpose of economy. When they start a train on a hill they frequently back up the engine in some way in order to take up the slack, in which case a brake would be applied on the rear end of the train in case it was going up a hill. This brake is not necessarily applied by means of a hand brake for it may be applied by air by the engineer. An engineer can handle his air in such manner as to have his cars all tightly together and release his air and start his train at the same time so as to get the benefit of whatever amount of slack is in the train so that he will only have to start one car at a time—one car follows, and then another one, and then another one, and so on until the end of the train is reached, before he is pulling them all, and by that time he has gained a little momentum. When the train is ready to start, then they throw the brake

(Testimony of C. D. Buzzell.)

on the rear car and allow the cars to run together in that manner, and when they start the engine in front first moves the first car and there is some movement of that first car before the second car is moved at all and in that way the cars are taken up gradually and the engine acquires momentum in that way that it would not acquire if the train was taut and it would all have to be started at the same moment. If an engine has only half of its rating or tonnage instead of full tonnage there is greater likelihood of strain on the draw bars in the cars.

Redirect Examination.

It might be possible for one of these cars to pass a terminal in a defective condition, but in view of the methods in use by the defendant company in the month of October, 1914, and its methods of inspection and other methods of operation, it is not probable that any car could leave a terminal in a defective condition. Every freight train is inspected as soon as or very soon after it arrives at a terminal, by inspectors, and is gone over thoroughly, and after any train has been broken up by the switchmen in diverting cars and setting out cars for different points and the train again made up it may be found that some damage has occurred in switching so that the train is then inspected again before leaving, and in that way it has a double check of the inspectors and also of the train crew, because certain men in each train crew are supposed to go over their train before leaving a terminal from one end to the other to see if they can see anything that is not right; so, while I say it is pos-

(Testimony of C. D. Buzzell.)

sible for something to be overlooked, it is not probable. This second inspection to which I refer is made after the engine and caboose are attached to the train, and before any of these freight trains leave a terminal they are provided with each of these inspections that I have referred to. Certain information is communicated to the engineer regarding air brakes. It is reported to the engineer that they have so many cars in the train and so many cars with air operative on them. That is merely a matter of form in the check with our road; but I do not think other roads require it, but we do, as an additional precaution and information for the engineer. The territory governs the tonnage rating of engines and an engine that is used in a mountainous country would not have as high a rating as one used on level territory or comparatively level territory. This rating is ascertained and based upon the tractive power of the locomotive and the experience which the company has had with the equipment, the topography of the country and the number of loads usually hauled over such country, and do all those things enter into and form the basis or foundation for fixing the tonnage rating of engines. With reference to a slack in the train and the use of a helper engine, I will say the existence of slack under the conditions concerning which counsel for the Government has inquired is necessary for a cushion to avoid undue shocks. There is no restriction of the amount of slack that may be used in a train, except as it may be caused by a broken spring which would contribute more slack and

(Testimony of C. D. Buzzell.)

which is not allowable, but the draw bar will only allow a certain amount of slack. Where a helper engine is used in connection with the movement of a train such engine usually comes within the amount of its rated tonnage and the lead engine is also working within its tonnage rating and for the purpose of taking care of slack the regular engine is usually on the head end of the train and the helper engine is placed a little over half way back towards the rear. The yoke rivets that are used upon cars for the purpose of connecting up draw bars do not differ in any way from those in general use on other roads. Bolts on cars are not permissible on any road at the present time and rivets are used exclusively for the purpose of securing the yoke to the coupling that is fastening the draw bar to the cars. The rivets used upon the Santa Fe do not differ in any material respect from rivets used on other railroads. They are practically the same, but made of a superior quality of iron. Formerly inch and one-eight rivets were standard; but for the last 3 years inch and one-quarter rivets have been made standard. The Santa Fe Company uses a special grade of iron for these rivets on account of it not being as liable to crystalization as are steel and some other materials. In my judgment the character of material out of which these yoke rivets used by defendant are formed is of a superior quality to the materials used for the same purpose by many, but I will not say all, other railroads. By using this model and the sketch which I have drawn on the blackboard showing a horizontal section of a draw

(Testimony of C. D. Buzzell.)

bar, follower and draft rigging, I can explain the manner in which yoke rivets are applied in connection with the draw bar. A yoke comes back around and over the end of the draw bar and is lipped over the end or shank. This yoke is made out of inch and a quarter by five inch wrought iron and forms a pocket. This yoke is lipped over each of these flanges at the end of the draw bar and secured to this coupler by means of two rivets. This yoke contains the followers and springs, thereby giving the coupler the necessary flexibility when secured to the car by means of the check pieces and other parts entering what as a whole is called the draft rigging. The yoke at the end of the draft rigging is secured to this coupler by two inch and a quarter rivets passing clear through the yoke and the shank of the coupler. The follower plates and the springs are placed further back towards the draft sills and this coupler is then put in between the two cheek pieces. The followers are made out of heavy iron varying from an inch and three-quarters to two inches in different equipment, and all are fastened to the car in such manner as to allow these springs to be compressed or extended. This distortion of the spring by compression or otherwise forms the basis for the slack. If these springs are compressed tightly together, then there is no slack in the train; but in a pulling strain the opposite takes place and the springs are compressed in the same manner, but the coupler goes the other way so that in shoving the coupler into the car it compresses the springs on account of the back part of the spring not

(Testimony of C. D. Buzzell.)

being able to move but to remain stationary, while in the pulling strain the opposite occurs as the spring is compressed from the other direction. Couplers are fastened to the tender in practically the same way as to the car. When the yoke rivets are in place there is no play around them, but the springs can work in back of the yoke which is solid to the coupler, behind which the springs are placed in such manner as to give them freedom of action for compression when under strain to enable them, when no undue strain is upon them, to resume a normal position. The yoke rivets are put in so that they will not interfere with the construction of the springs because the rivets come in ahead, between the springs and the face of the coupler, so that they in no way interfere with the spring movement, in the same manner as a coil spring on vehicles or on an ordinary screen door. The spring has free action to compress or be distorted as the case may be in each case. This gives the flexibility to the spring. The rivets are in a compartment different from that in which the springs are contained and the rivets pass through in the yoke and the draw bar and secure this yoke to the draw bar or coupler and the follower sets directly back of the rear end of the coupler and the springs come in back of that. The shank of the coupler does not work in a groove, but the followers or other devices used in place of followers, of which there are many kinds, does work in what might be termed a groove, as it has plates in the draft rigging allowing them to work back and forth. The draft timbers are located

(Testimony of C. D. Buzzell.)

on each side of the yoke, and underneath the shank of the coupler is placed what is termed a carrier iron fastened to the front end of the draft timbers and going underneath just back of the hood of the coupler, while above the shank of the coupler is located what is termed a dead block. The distance between the horn of the coupler and the front end of the dead block under M. C. B. rules varies with different roads, but is approximately two inches, although some coupling devices allow up to $2\frac{1}{2}$ inches. The draw bar, being shoved back when taking the slack, can only get what slack is there which is from 2 to $2\frac{1}{2}$ inches, and in pulling the draw bar forward as the engine starts there is such additional slack as you can get out of the springs in the forward pull. All roads interchanging in interstate commerce do not have the sleeve with this lip like that shown on the board. If one of the bolts or rivets extending through the butt of the coupler and the front end of the yoke should be broken it would materially minimize the strength of the draw bar if the lip is not present, as the effect is to weaken the connection between the coupler and the yoke. The draw bar will put out, ordinarily, from 2 to $2\frac{3}{4}$ inches, according to the class of draft rigging, and that is the amount of variation that can be acquired before the springs are set solid together. If the brakes are set at the rear of a train of forty cars and the train is backed down as far as it can be before the slack is taken up, then if there is $2\frac{1}{2}$ inches variation to each car the engine can move probably a distance of 200 inches before

(Testimony of C. D. Buzzell.)

the rear car is moved, and one purpose of this slack is to assist in the starting of trains, not only to prevent shock, but also to assist in the starting of trains. We have about the same system of inspection now that we had in October, 1914, and we have had practically same system for some years, although it has been getting a little more rigid, I think, every year. I am acquainted to some extent with other divisions on the line of the Santa Fe, and though instances have occurred and do occur where it has been brought to the attention of the Santa Fe Railway Company that our inspectors have failed to discover various kinds of defects before the trains have left the terminals, it does not occur frequently. I would not say that it is very often that it has been brought to the attention of the railroad company by the Interstate Commerce Commission instances where their inspectors have discovered defects that our men had failed to find, although it has occurred. For the last few years the Interstate Commerce Commission's inspectors have made inspections of equipment on our line of railroad, but we usually are not aware when they are making inspections for violation of the law. There is another inspection, termed a general inspection, made jointly by the commission's inspectors and our own and such defects as are found are noted, and reported, I presume, jointly, to the railroad company and to the commission. I presume that the inspectors for the commission make and send to the Interstate Commerce Commission reports, copies of which then are returned to the railroad company. I have seen copies of their

(Testimony of C. D. Buzzell.)

inspections, but I don't know to whom they go. These inspections are not always made after our men have once gone over the same equipment, but in a great many instances they are. There have been instances where defects have been found that were not discovered by our employes, and where reports have been sent to our company showing defects that were not discovered by our employes when they made their inspections, but the cases I have found of that kind I would not say were very numerous, and we have also had cases where the inspectors for the commission have discovered cars to be defective and not equipped in accordance with the safety appliance laws that were not discovered by our employes.

Redirect Examination.

In my 28 years of railroad experience, the instances I have known of where matters have got by the inspectors under my department and have thereafter been reported by the commission have been of infrequent occurrence, especially if you consider the number of cars inspected. There is no fixed number of cars inspected during any one month, and I do not know what is the approximate number of freight cars on the coast lines on any one date, but at times we have handled as high as 35,000 cars through a small terminal like San Bernardino in a month. An order of the Interstate Commerce Commission dated March 13, 1911, promulgated pursuant to the safety appliance acts, exacts additional requirements with regard to the standard of efficiency of equipment and prescribed a standard to which equipment must be made to conform

(Testimony of C. D. Buzzell.)

on or before the 1st day of July, 1916, and since the promulgation of that order we have, as rapidly as equipment has been placed on the repair track, been bringing it up to the standards prescribed by that order, as rapidly as it was possible, although by the terms of that order we are given until July 1, 1916, to bring our equipment up to these latest requirements. I am not familiar with the provisions of the boiler inspection act, as that has nothing to do with my department.

Recross-Examination.

The yoke rivets to which I referred go all the way down through the shank of the coupler. I don't know why the term "bolts" is sometimes used in referring to these "rivets." It is true that a number of years ago some railroad companies used bolts instead of rivets, but bolts are not allowed by the Master Car Builders' Association rules to be applied in lieu of rivets in coupler yokes. The difference between a bolt and a rivet is that a bolt has nuts on it so that it can be removed without being cut out, while a rivet is put in there hot and driven up and riveted over so that it is impossible to remove it without its being broken or cut off by mechanical means, and on all of our cars the shanks of the draw bars are made secure by means of rivets instead of yoke bolts, and whenever foreign cars that come on our line are equipped with yoke bolts instead of the rivets, we remove them as soon as the car gets on our line, if we find them. There is no company now that allows bolts to be put in in place of rivets, and I doubt whether during October,

(Testimony of C. D. Buzzell.)

1914, we handled any foreign cars that had the yoke bolts instead of the yoke rivets.

Re-Redirect Examination.

Among train men yoke rivets are referred to as yoke bolts quite frequently, and the two terms "yoke rivets" and "yoke bolts" are used interchangeably. I regard the rivet as more efficient because the nut is less liable to fall off and cause the bolt to drop out and because the rivets are less liable to breakage. I know of no standard of requirement fixed by the Interstate Commerce Commission with respect to yoke bolts and draft rigging. There is no requirement of the Interstate Commerce Commission defining the tensile strength or dimensions of yoke bolts or yoke rivets and the government does not contend that there is.

Testimony of Benjamin H. Lent.

Benjamin H. Lent testified on behalf of defendant:

Direct Examination.

My name is Benjamin H. Lent. I am road foreman of engines in the employ of defendant and have been so employed between 6 and 7 years. Previous to that time my employment was locomotive engineer for defendant company. Previous to that time I had worked in that capacity a short time for the Missouri & Arkansas. In my capacity as road foreman of engines in the employ of defendant I am fairly familiar with the terms and requirements of the order of the Interstate Commerce Commission dated June 2, 1911, in the matter of the preparation, approval and establish-

(Testimony of Benjamin H. Lent.)

ment of rules and instructions for the inspection and testing of locomotives, boilers and their appurtenances, which was promulgated pursuant to an act of Congress approved February 17, 1911. I am familiar with the requirements of Rule 50 as embraced in the order of the commission as set forth in the official publication which you have shown me.

Testimony of John A. Christie.

John A. Christie was recalled and testified.

Direct Examination.

I am familiar with the requirements of the act of Congress approved March 4, 1908, and known generally as the hours of service act.

Exception No. 1.

Q. That act by its terms became effective March 4, 1908, after its passage and approval by the President of the United States on March 4, 1907. Since that date what changes in methods, practices or properties have been made by The Atchison, Topeka and Santa Fe Railway Company upon the division of which you are in charge for the purpose of securing a compliance with that law?

Mr. Walter: If the court please, we object to that as being immaterial and not in any way pertaining to the issues in this case.

Which objection was by the court sustained; to which ruling the defendant then and there duly excepted.

Exception No. 2.

Mr. Burks: I now desire to make the following offer of proof. I offer to prove by this witness that,

(Testimony of John A. Christie.)

anticipating the effective date of the hours of service act, and for the purpose of minimizing the possibility of violating that statute, the defendant company, upon the particular division of which Mr. Christie, the witness, is in charge, has expended upwards of two million dollars in double-tracking, in extending sidings and in installing additional sidings, in arranging for the transportation of pipe line of fuel for engines, which otherwise would have had to be transported by trains; and this for the purpose of showing the precautions taken by the defendant for the purpose of enabling its trains to be so run over that division as to minimize the possibility of violations of the hours of service law.

Mr. Walter: We urge the same objection.

Mr. Burks: And the offer will be refused?

The Court: The offer will be refused.

Mr. Burks: And to the refusal of the offer the defendant desires to reserve an exception.

The Court: Very well.

Exception No. 3.

Mr. Burks: If Your Honor please, with this witness on the stand I desire to renew the offer heretofore made of testimony as to the re-adjustment made by the defendant to meet the new conditions created by the hours of service act. I do this in no spirit of unnecessarily consuming time, but I believe that, in fairness to the court, attention should be directed to the fact that the decision referred to by counsel and from which counsel read as supporting his ground of objection—the case of *St. Louis, Iron Mountain & Southern Railroad Company vs. McWherter*, from the

(Testimony of A. Pecchia.)

Interstate Commerce Commission promulgated pursuant to those acts, my inspection was such as would enable me to determine that fact, and, as far as I know, the car was absolutely O. K. After its arrival at Bakersfield I again inspected that car before it departed from Bakersfield. We tried the air brakes, and also looked over every detail again before the train went out. That car left Bakersfield in extra Evans at 5:45 p. m. on October 4, 1914, by which I mean an extra train in charge of conductor Evans. At the time that car was placed in that train and at the time the train was ready to start that car was in a condition which complied in all respects with the requirements of the safety appliance acts.

Cross-Examination.

S. F. P. & P. car 913 was a box car. I have a record of my inspection of that car. Right here (witness producing book from pocket) on the first page there is a record of all the cars in the train in which this car was hauled, coming in on October 4. There is nothing there to show that I inspected that car any more than that the car was in the train and I inspected the train. All I remember about that car is from my record, which shows that the car was in the train and that I inspected the train, but if there was anything more I would have it right on this page here, whether bad order or not, or whether any repairs were made, and there is nothing there to show that I "bad ordered" that car, but there are several cars on the same train that I have referred to as "bad order." All that I remember now about this car of my own

(Testimony of A. Pecchia.)

personal knowledge as refreshed by my record is that it was in the train, and that I found nothing wrong with it, found it O. K., and the same is true in regard to the train that I inspected in which that car was placed when it left. I have no record of anything wrong with it. I began the inspection of this car when it came in at 3:30 p. m.; we started in just as soon as the train stopped. There was four men on this same job of inspecting this train. Two men started in on one side of the train and two men on the other, and we got to the switch engine, one on one end of the train and one on the other. We just allow so much time as is necessary to meet the other men and then we turn the train loose to the yard man, who switches it and puts it away and puts the train together again. My partner and I started at one end of the train, making an inspection. And two more inspectors were on the other, and we inspected toward each other. And when we met, that finished that inspection of the incoming train, and then we inspect it again when it is made up to go out, when I couple up all the air hose and inspect the air on the outgoing train. When the train comes in the air hose are all coupled up. When the air hose are all coupled up on trains ready to depart I make inspection again. 4 men inspect the train the same way before it departs, except there is some other train in at the same time. Sometimes we have a passenger train in at the same time, and probably two men handle that train. Otherwise the four men handle the train. I and my man inspected on this outgoing train according to my record. I do not re-

(Testimony of A. Pecchia.)

member whether or not anyone else helped me when I inspected the outgoing train. There was one fellow who is not in the employ of the company any more, whose name is T. W. Moore, and another man whose name was L. A. Draper. There was only 3 men at that time who inspected the out going train, but there are 4 at the present time, as business is better. At that time 3 men helped me on the incoming train and 3 on the out going train. I can tell you from my book where car S. F. P. & P. 913 is standing on the train and whether I personally inspected it. I started from the east end, and the other men started from the west end of the yard. If I got two men it would be the west end; if I got 3 it will be 1 on the west and 2 on the east end. On this occasion I began my inspection on the east or the head end of the train. I can tell you how far back I inspected. This car is right on my end of the train, just 6 cars from the head end—from the east end of the train, which was the end of the train that I inspected and she was 25 car deep when the train went out. The chances are that when it is 25 car deep and in a 40 or 41 or 42 or 43 car train, the other man inspected it going out. There were 36 cars in the train when it came in. My duties required of me in the matter of inspection as to the appliances that I should on each side of those cars look over the running gear, the wheel flanges, the draft rigging, the draft bolts and the safety appliances of all sorts, such as grab irons, steps, sill steps, brake steps, cut in levers, knuckles, draw bars, air brakes, brake rigging, and the journals

(Testimony of A. Pecchia.)

and to feel the boxes to see if there are any hot boxes. Also inspect doors, roofs, ladders, running boards and the end parts of the car. The kind of inspection which I was supposed to give to the draft rigging was just a general inspection to see if the draft rigging got all the bolts in tight and properly; if not we will send them into the repair shop. We have to inspect each end and each side of the car as to draw bars, and in order to inspect it we crawl down under the car so that we can see everything—body bolster and brake rigging and draft rigging. It is required that I and my partner examine each draw bar and the draft rigging of each car at the same time; one on each side of the car, and we have to do that twice with each car. We do that again—we look over the train again going out, but mostly when we are going out we try the air brakes, and also we kind of look the train over again, and if there is anything damaged we put it in the switch. It takes me and my partner about a minute to a car to examine each and every appliance that I have described as it being our duty to examine. We figure that a 40 car train, with two men, takes about 35 or 40 minutes. We can make a complete and satisfactory examination of all these appliances and all this equipment on a car in 1 or 2 minutes. 35 or 40 minutes to a 40 car train is all the time we allow, and that is sufficient time to examine all the equipment on each car so that we will know with certainty that it is absolutely safe to go out, unless we get a hot box or anything like that and we have to stop over and fix the car when it takes

(Testimony of A. Pecchia.)

a little more time. If everything is all right I think that is enough time. We cannot find out if everything is all right until we examine everything, and if we find something defective it takes some time to make a note of that so that it takes a little more time, but if we do not find anything out of repair we get through the inspection much quicker. My partner and I gave about 35 minutes to the inspection of this train, which had 36 cars coming in, and of which number my partner and I inspected about 20 cars in about 35 minutes. I remember nothing personally of this particular car, except that it was in a certain train. I don't remember that there was anything the matter with it, and I have no record of any repairing having been done to it. I remember nothing about this car myself any more than I do about the other cars in the same train, as I have no record of any defects in this car. I can't say how many cars I inspected on October 4, but there were several trains. We inspect sometimes 10 or 12 or 15 trains in one day. At the present time we are inspecting 450 to 500 cars in the day and then many in the night. Some times we go higher than that. We worked from 6 to 6, or during 12 hours. I do not remember anything more about this car than I do about any other cars that I inspected that day.

Testimony of J. A. Evans.

J. A. Evans testified on behalf of defendant:

Direct Examination.

My name is J. A. Evans. I am a conductor in de-

(Testimony of J. A. Evans.)

fendant's employe, and was in charge of train extra 3203, or 1st 34-D, which left Bakersfield October 4, running between Bakersfield and Barstow. That train left Bakersfield, according to my time book, at 5:35 p. m., at which time I had been on duty for 45 minutes, preparatory time, during which I had looked over my train. My brakeman looked over the running gears and couplings to a certain extent and looked at the brakes and things. I can't state whether, before we pulled out with that train, we stretched it because I was in getting my bills. If that train was stretched it would have been stretched by the engineer, who was J. P. Shomate. The train was made up of mostly box cars. I had 2 empty tanks in the rear end and the rest of the equipment was all loads from that on up to the head end. Engine No. 3203 was on the east end or head end of the train, and it was from that number of the engine that the train derived its designation as extra 3203. An extra train is designated by the number of the engine placed on the head end. Following engine 3203 the equipment in the train consisted of box cars and refrigerators. 31 box cars and 11 "freezers" or refrigerator cars, all loaded with different things, merchandise, raisins, dried fruit, wine, canned goods and lumber and spuds. It was not a green fruit train, but was what the Santa Fe designates as the Red Ball or fast freight. Engine 965 occupied a position between the 15th and 16th cars from the rear end. Engine 3203 was a Mallet compound, and the 965 was what I guess you could call a Deckapoid or Santa Fe type of engine, with 5 driving

(Testimony of J. A. Evans.)

wheels on each side. The engineer in charge of 3203 was J. P. Shomate, while F. H. Tibbs was in charge of 965. At the time that train left Bakersfield it was intended that the 965 should accompany it only to the "Summit," which is the top of the mountain, and just about 2 miles east of Tehachapi. Summit is located upon a single track road, up to the top of the hill and trains are operated over that track under the direction of the Southern Pacific train dispatcher. From the time we left Kern Junction until we arrived at Mojave the movement of the train was controlled by Southern Pacific operators and dispatchers. At the time we left Bakersfield there was no condition in or about any engine or car in that train which, in so far as I knew, could cause me to foresee that that train would be delayed before reaching Barstow, and as far as I knew there was nothing to cause a delay from Bakersfield to Barstow. It is my custom to keep an accurate record of all delays to which a train of which I am in charge is subjected upon Santa Fe form 827, which is an original form and not made up from entries in my train book. The entries upon this form designated as form 827 standard are made in my handwriting. That form is a record kept by me in the usual and ordinary course of business and shows the movement of that train and the delays to which that train was subjected, and it correctly shows the points at which and the time during which the progress of that train was delayed and the causes of those delays. On that trip we reached Cable at 11:50 p. m., and previous to that time we had been subjected to further delays of 10

(Testimony of J. A. Evans.)

minutes at Bakersfield, 25 minutes at Magunden, 10 minutes at Caliente, 30 minutes at Allard, 35 minutes at Bealville, and 30 minutes at Woodford. I was delayed at Allard 15 minutes on account of extra 1645 west, and 15 minutes by broken knuckle in car G. C. 4086. At Cable I was further delayed, and that is where I had all the trouble. We always speak of it in railroad slang as trouble when we break in two or have any hard luck, as it is customary and usual among railroad men to call a delay of considerable duration "trouble." Independent of my train delay report I recall that trouble. According to my delay report I was delayed at Cable 2 hours 55 minutes, from 11:50 p. m. to 2:45 a. m. We were delayed for 25 minutes meeting train No. 115 and 5 minutes meeting train No. 49, then I started out of there and pulled the draw bar out of the head end of engine 965 and started a draw bar out of car S. F. P. & P. 913, and then we had to change the engine 965 from the spring part of the train to the head end, and when we brought the S. F. P. & P. 913 back from the head end and put it behind the caboose we changed engines, and started again, and blew out the water plug out of the cylinder on the right side of engine 965. The effect of those incidents upon the movement of my train was that it made a consequential delay of better than 2 hours right there at Cable. After these occurrences we had to wait for a helper, and this delay report shows "waiting for helper 1 hour." The reason we had to wait for a helper was that we thought the 965 and 3203 was unable to start the train there. Water plug blowing

(Testimony of J. A. Evans.)

out of the low pressure cylinder in the 965 disabled her, I guess, to a certain extent, I don't know how much. I received the information entered upon the record to the effect that the water plug had blown out of the low pressure cylinder from engineer Tibbs, who was in charge of engine 965. I have no personal knowledge of the condition of the 965 when she left Bakersfield. At the time we left Bakersfield that train was not called upon to carry any more than the tonnage ratings of the two engines which were placed in charge of the train. The tonnage rating of engine 3203 was 950 tons and the tonnage rating of 965 was 950 tons and the total tonnage in the train at the time we left Bakersfield was 1699 tons. I had 1763 tons, but set out 64 tons in order to bring my train within the tonnage rating of the 2 engines before leaving Bakersfield. But for this delay at Cable I would have been able, had there been no further delays, to reach Barstow within the 16 hours. The usual and ordinary time consumed by a train pulled by 2 engines, one a Mallet compound and the other of the 900 class, with a tonnage of 1699 pounds, in making the run between Bakersfield and Barstow, averages about 12 hours or 12 hours and 30 minutes. It depends on the time of the day you go out. Sometimes we meet more passenger trains. If we left here in the morning we would have a good chance of getting over in about 11 hours, but leaving there in the evening, at the time we did, it takes about 12 hours and 30 minutes, including all of the stops for water and delays waiting for trains to pass and delays which are usual and ordinarily incident

(Testimony of J. A. Evans.)

to the operation of freight trains, together with our preparatory time of 45 minutes, by which is meant that the conductor is supposed to take all of the numbers of the train, and get bills to correspond with them, and the brakeman is supposed to look over the train and get their engines out, which generally takes 30 to 45 minutes before the train starts, which time we are on duty and are subject to the hours of service act. We always include that preparatory time in estimating the time we may remain on duty without violating the hours of service law. On October 4 we made a good run from Bakersfield to Allard. We made running time or what they figure on as running time. No trains make any better than that without it is a special train. We made our usual and ordinary running time between Allard and Cable. We were compelled to stop at Cable for 115 and 49, two first class trains. The joint track at Cable is right on the steepest part of the mountain, on the west side of the mountain, where the tracks are raising about 110 to 115 or 120 feet to the mile, on what is known as about a $2\frac{1}{2}$ per cent. grade. This is on what is called Tehachapi Pass, and the track extends down Tehachapi creek canyon, and it is a very difficult piece of road to operate on account of such a heavy pull, and the track at that point is characterized by curves. At Cable, where we stopped, there are about 3 or 4 curves, and the track is almost as crooked as a snake when it is crawling. After waiting at Cable for an hour for a helper, one came from Tehachapi, which is about 3 or 4 miles from Cable. There is a single track at that

(Testimony of J. A. Evans.)

point, all the way along, and the movement of trains over that piece of track is controlled by the dispatcher, but for extra safety precaution they have what they call automatic block signals, and when you find a block closed against you you can not move into it without first the flagman preceding.

Cross-Examination.

The operation of this train over the line from Kern Junction to Mojave is controlled entirely by the Southern Pacific Company, as far as orders are concerned. Kern Junction is just east of Bakersfield. From Bakersfield to Kern Junction they have a staff for 1.7 miles owned by the Santa Fe, but when we get to Kern Junction we go onto the Southern Pacific tracks, over which all movements of the trains are governed by orders from the Southern Pacific dispatcher located at East Bakersfield, who keeps in communication with us all the way along to keep up with the progress we are making, and he knows whether we are making regular time or not all the way through to Mojave, as his train sheet on the O. S.'s from the different telegraph offices will show him whether I am making running time or not. Information is given to him by the operators at each telegraph office as I pass it, as to the hour that I pass any particular telegraph office, and in that way the dispatcher knows the progress my train is making. I am paid by the Santa Fe during all of this time, although I run on the Southern Pacific tracks. When I checked my train ready to start from Bakersfield I found we had too much tonnage and so I had to take some of it out at Bakersfield to reduce the

(Testimony of J. A. Evans.)

total of my train to get it within the tonnage rating of our engines, which took 10 minutes, and when we started from Bakersfield we had one ton less than the tonnage rating for our two engines. The tonnage rating for our 965 was 750 tons out of Bakersfield, and I presume that contemplates that the engine shall be in good condition in order to haul that much tonnage. According to our rules and instructions we are not supposed to handle anything out of the terminal without it is in good condition, and the tonnage rating means the tonnage rating for the engine when it is in good condition. The steep grade begins at tunnel Half, west of Caliente, which is west of Cable about 37 miles. East from Cable to the top of the hill the distance is about 4 miles. Before we got to Cable that morning the only trouble we had was starting the train at Allard, where we broke a knuckle, which severed the connection of the train, and we were delayed as a result of that for 15 minutes. It was a very cold night. The nights are cold on that hill. I do not know anything about whether we used up all our sand by the time we got to Cable except from reports that the engineer made to me. I didn't get up to look in the sand dome. We had been at Cable 30 minutes for 115 and 49—25 minutes for No. 115 and 30 minutes for both of those trains, and then when we started out of there engine 965 slipped on a frosty rail and engine 3203 started out. Both engines whistled off and we let the brakes off and both started out, when the 965 slipped, and of course that stopped the momentum of her shoving and 3203 took it away from her and of course that

(Testimony of J. A. Evans.)

subjected the draw bar on 965 to an extra strain, and that is what broke the train in two, because that broke the connecting bolts, and that is what pulled the draw bar out and then the extra strain on the head end pulled the draw bar out of S. F. P. & P. 913. At that time we pulled the draw bar out of the front end of engine 965, which was the first draw bar to let loose, and after it let loose the draw bar on this other car S. F. P. & P. 913 pulled out. Then we brought that car 913 down the main line with the head engine, with the 3203, and backed it down there and put in behind the caboose and coupled into it and shoved it then to the rear end portion of the train, with a switch engine, and put the 3020 in the rear part of the train and took engine 965 to the head. To switch this 913 car back to the rear end required, I should judge, about 15 or 20 minutes, and we secured this car 913 to the train by placing it in behind the caboose. The west end draw bar was out of this car 913. So we backed it in behind the caboose and attached it to the caboose with the east end draw bar of the car which had the other draw bar pulled out. Then we put the engine 965 in the front of the train and used the good draw bar which was on the rear end of the engine to pull the train with and then we put engine 3203 in the place where engine 965 had been before. Then we started out again the second time and that is when we blowed the water plug out. I do not know why that was. I would think that the blowing out of the water plug would reduce the efficiency of the engine, as the effect was to create an

(Testimony of J. A. Evans.)

inch and a half or two inch hole there that the steam comes out of. Our trouble in getting out of Allard was caused by frosty and slippery rails. The condition of the rail necessitated the use of more sand than is ordinarily used. I don't know how much sand they had when they got to Cable, where engineer Tibbs reported that he had used it all. I went on duty at Bakersfield about 4:50 p. m. and arrived at Cable at 11:50 p. m., and we were delayed there 30 minutes for two passing trains, No. 115 and No. 49, before the train broke in two as we were attempting to start again. The pulling of the draw bar out of the engine 965 and the pulling of the draw bar out of S. F. P. & P. 913 occurred almost simultaneously, although there was an interval between the two from the time that the air should travel from the 965 up to where that 913 stood in the train, which might make a difference of two or three seconds.

Recross-Examination.

Engine 965 did not proceed to Barstow, as we cut her out at Summit, which is at the top of the hill, where we changed engines again. We used engine 965 from the time that draw bar was pulled out until we got the train to the top of the hill, and cut engine 965 out at 3:35. We left the Summit at 3:35. Car 913 was not hauled all the way into Barstow, for we cut it out and left it at Mojave. It was loaded with merchandise and its destination was San Bernardino. At no time was it intended that the engine 965 should proceed with that train any further than Summit. Engine 965 was the helper engine for No. 3203, and

(Testimony of J. A. Evans.)

when we leave Bakersfield the helper is supposed to cut out at the summit, unless we have an accident or failure of one of the other engines. At Summit engine 965 was cut out and returned to Bakersfield. After leaving Cable Mojave was the first point which we reached at which a car such as S. F. P. & P. 913 in the condition it was in after the break in two could have been repaired. My reason for setting this car out at Mojave was to admit of the car inspector putting a bad order tag on it. It was set out there for repairs because that was the next regular repair point and the next point at which the car could have secured any repairs, the first place there was any repair men located at all. The regular average running time from Mojave to Barstow is about $3\frac{1}{2}$ hours going east with a Mallet engine and a train of the kind we had.

Testimony of Fay H. Tibbs.

Fay H. Tibbs testified on behalf of defendant:

Direct Examination.

My name is F. H. Tibbs. I am a locomotive engineer and have been engaged in that occupation about 9 years. I worked for the Great Northern Railway Company. I have been in defendant's employ since 1909. I was the engineer in charge of engine 965, which was helping the 3203 east, or 1st 34-D, between Bakersfield and Summit, on October 4, 1914. Previous to October 4 I had been on engine 965 for about three trips previous. Those three trips were made over the hill, between Bakersfield and Mojave, and I believe I

(Testimony of Fay H. Tibbs.)

made a through trip, too, to Barstow and return. One trip between Bakersfield and Barstow and another trip between Barstow and Bakersfield, on the through trip. I was the leading engineer and on the others I was helper. On the afternoon of October 4, when I left on this extra in charge of conductor Evans I was acting as a helper. It was intended that this engine 965 should run only to Summit at the time we left Bakersfield on October 4. The 965 had performed normally on the preceding trips and at the time I left Bakersfield on October 4 she was in normal condition, in her usual good condition. It was in the same good condition in so far as I could determine that it was when I had used it previously. Before leaving Bakersfield I made a careful inspection of that engine for the purpose of determining that it was in shape to move. And as a result of such inspection I did not find in or about that engine any condition which would cause me to believe or anything whatever which would cause me to foresee that it would encounter any trouble before reaching Summit. There was nothing about the condition of that engine at the time I left Bakersfield which would cause me to suspect that it might encounter trouble between Bakersfield and Summit. Before leaving Bakersfield, for the purpose of determining whether or not there was anything which would cause the 965 to go wrong before reaching Summit, I made an inspection or examination of my engine, No. 965, at Bakersfield. We have 30 minutes preparatory time in which to change our clothes, put on our overalls, and give our engine a thorough inspection

(Testimony of Fay H. Tibbs.)

to determine whether it is in proper condition to be taken out on the road, and I did that on that day. I made a careful inspection, such as examine the length motion, the tires, and the machinery in general, to see if there had been anything neglected or overlooked, and as the result of such inspection I was able to determine whether anything had been neglected or overlooked before that engine was turned out of the round-house, and I found that there had been nothing overlooked, and in so far as I, judging by my experience as an engineer, could determine, there was no condition in or about that engine which would cause me to foresee that it would encounter any trouble. I had worked on the hill previous to October 4 for 4 years, running between Bakersfield and Mojave, and I am thoroughly familiar with the hill. My employment by the defendant was continuous during that period of four years and during all of the time I was operating between Bakersfield and Barstow, either making a helper trip or a through trip daily during all of those 4 years over the hill, both in freight and passenger train service, and am fairly familiar with the operation of freight trains over that piece of track. The No. 965 is an engine with 5 drivers, with about 19 feet 6 inch wheel base, has a boiler pressure of 220 pounds, weighs about 277,340 pounds, has a tractive power, I think, of 32,100 pounds, and has four cylinders, and it is a compound engine and has two high pressure cylinders and two low pressure cylinders; the high and low pressure cylinders can be worked independently. That engine was equipped with a sand

(Testimony of Fay H. Tibbs.)

dome with a capacity for about 2½ or 3 barrels or sand. Customarily and ordinarily the dome of that engine holds enough sand to last me on any trip that the engine may be started upon, unless I run upon some very unusual conditions. At the time I left Bakersfield on October 4 there was nothing whatever to indicate, judging from my past experiences, that I would run up against any unusual condition. As the result of 4 years' experience operating over the hill I would ordinarily expect such weather as might cause frosty rails, along the middle of November. From all appearances when we left Bakersfield on the night of October 4, 1914, it was to be nice weather, but before we got to Cable we found it a little bit cooler. At the time I left Bakersfield on the night of October 4 I had the usual supply of sand in the dome of engine 965. Preceding this time I had operated other engines of the 900 class. The condition of the 965, as compared with other 900 class engines which I had operated, was, if anything, better than lots of the rest of them. It hadn't been out of the shop as long or in use as much as some of the rest of them. I would regard engine 965 as having been in first class condition at the time that I started from Bakersfield that night on October 4. Between the time we left Bakersfield and the time we reached Summit after leaving Bakersfield at 5:45 o'clock on October 4, we encountered some trouble. The first trouble we had after leaving Bakersfield was when starting the train at Allard, which is about 30 miles from Bakersfield. Cable is the next place I remember of having had

(Testimony of Fay H. Tibbs.)

trouble. At that point we headed in to clear No. 115 and No. 49, a couple of passenger trains; then we started to pull out and pulled up several car lengths, maybe three cars, from where we stood first, and the 965 slipped several revolutions—the wheels spun around. In the meantime the 3203 was still pulling against the train, and that let the rear portion of the train surge back against the 3203, and that broke the bolts in the front draw bar casting on the 965. I then backed the rear portion of the train up and the 3203 came around from the head end and headed on the behind part of the train in the west end of the siding, and the 965 went up to the main line and got on the head end of the train. Before I started the train after the passenger trains had got by us I whistled off and made a proper start. At the time the draw bar on the head end of the 965 pulled out the 3203 had just about got onto the main line. I think it was near the main line where I found the head end of the train, and it was very nearly on the main line. I believe the main line was blocked by the position of the 3203. After we got the 965 up at the head end of the train and got all together again we started to proceed to Tehachapi. We started to pull up again and this time I got out onto the main line and the water valve blew out of the back end of the right low pressure cylinder, and then I could foresee after that happened that we would not have time under those conditions to make Tehachapi for another train, so we backed into Cable and I tried to make repairs on this water valve and couldn't find anything on either engine that would

(Testimony of Fay H. Tibbs.)

answer for the purpose, and I couldn't have very well used it if I found an extra water valve, because the old water valve had broken off flush with the cylinder where it screwed into the cylinder, and there is a jacket that goes over that. I could have repaired it if I could have found an extra plug, but before the repairs could be made the remaining part would have to be chiseled out of the cylinder in some way and it would take several hours. Assuming that I had another valve to put in I would have to remove the jacket or cover off of the back end of the cylinder and it would take a couple of hours. There is a piece of brass screwed far into the cylinders, and in removing that part of the valve which had not been broken off it would have to be chiseled out by pieces. The part that remained in there was made of brass.

Cross-Examination.

I inspected my engine at Bakersfield on the evening of October 4. I had trouble with my engine that day. It did considerable leaking, but I wouldn't say that my trouble was due entirely to the water on the rail. I reported as examining to see if there was a cracked saddle and whether water was leaking on the rail. I didn't know for certain whether there was or not. I made this report in regard to the condition of my engine, "In starting out of siding at Cable engine 965 was slipping bad account having used up all sand in dome; engine had cracked cylinder saddle and was dripping water on rail; train was moving when break in two happened; pulled out draw bar casting on engine 965, draw bar S. F. P. & P. 913." I made that

(Testimony of Fay H. Tibbs.)

report after I found out for certain that the cylinder saddle was cracked, but I don't know when the cylinder saddle became cracked. The leaking of the water on the rail would affect the ability of the engine to pull if it was hitting the rail, and especially when the weather was cool enough to freeze the water on the rail, but the temperature was not that low on October 4. Whether it froze or not it would have a tendency to make the wheel slip. I had trouble with this engine out of Allard, but nothing further than slipping. We had a break in two there at Allard, about 30 miles from Kern Junction. The break in two there, as at Cable, was caused by the wheels slipping on the rails. I used up all my sand between Kern Junction and Cable. Ordinarily I didn't do that. When I got to Cable I had very little sand, so I got up and raked it down where it would reach the sander and finally I used all I had. From Bakersfield to Cable I made about running time. Made about running time while we were going. Of course, we couldn't figure that we made running time while we were having trouble at Allard, but we only had 15 minutes trouble there, due to the break in two. The regular running time from Bakersfield to Cable is about 12 miles an hour. From Bakersfield to Cable is about 48 miles, and the regular running time is about 12 miles an hour, figured from the time card, that is the running time of the train. The time required to go to Cable from Bakersfield should have been something like 4 hours, but we consumed from 4:45 to 11:55, or about 6 hours 10 minutes. We made the regular running time while we

(Testimony of Fay H. Tibbs.)

were going, but we had still other delays. We took water on the engine at Woodford, which delayed us 10 or 15 minutes. I believe we made about running time. I don't know exactly whether it was 12 miles an hour or not, but it was around there some place. This was an extra train, but it was run on a schedule over that territory for that time. Between Kern Junction and Mojave it ran as a regular train, Southern Pacific No. 252, but it was run as an extra from Mojave to Barstow. It did not run as an extra from Bakersfield to Cable, and it has been designated as extra 3203 only on the Santa Fe tracks from Mojave to Barstow. On the Santa Fe system this train would be known as 1st 34D. It was run as an extra freight. It is customary on the Santa Fe to run freight trains as extras. The same character of train operated over the tracks of the Southern Pacific, in a case where it is a usually run freight train, is run upon a schedule and is given a number. In this case it was Southern Pacific train No. 1st 252, so designated upon the Southern Pacific train sheets which are here. 252, Evans, Shomate, Tibbs. That is the time table in effect over the Southern Pacific line from Kern Junction to Mojave, but it is not the time table we left Bakersfield on, although it is the time table that we concluded the trip on. That time table went into effect at midnight. That other time table was in effect when we left Kern Junction. By the time table in effect when we went on the joint track, 1st No. 252 leaves Kern Junction at 5:25 p. m. and arrived at Summit at 9:40 p. m., and was due at Cable at 9 o'clock p. m. if running on time.

(Testimony of Fay H. Tibbs.)

When this train arrived at Cable at 11:50 p. m. it was more than 2 hours late. According to the Southern Pacific time table our schedule leaving time from Kern Junction was 5:25 p. m. and we were due at Cable at 9 p. m. The running time of that train between Kern Junction and Cable was 3 hours and 35 minutes. I don't know what time we left Kern Junction, but the train left Bakersfield at 5:45, and the time allowed to go from Bakersfield to Kern Junction was about 15 minutes, the allowed time. We left Bakersfield at 5:45 and arrived at Cable at 11:50 p. m., but I would say that the train made its regular running time with the delays figured out—delays for water and the break in two at Allard. If we left Bakersfield at 5:35, arrived at Cable at 11:50, the time consumed between those two points was 6 hours. I examined the engine to see in regard to that plug being blown out after it was blown out. I never found the piece that blew out. It had 220 pounds of steam pressure on there, and I don't know where it went to. I could not tell anything about what caused it by examining what was left there. I couldn't see what was left in there any more than a faint outline of it. I could tell it was broke off in there, and there was hot steam coming out of where it was broken off. I do not know when that saddle became cracked, but while working around the engine I saw that water was dripping down on the ground between the rails. I stated in my report that the water was dripping on the rail because the wind was blowing and blew it on the rail. I didn't notice the water leaking at Allard at all. I made the report

(Testimony of Fay H. Tibbs.)

as to the saddle being cracked and the water dropping on the rail after the accident, maybe a couple of days. The report which I made to the mechanical department would show the date. Plaintiff's exhibit No. 1 is an accident report of the Santa Fe on form 1178, made by me and dated October 4, 1914, relative to the accident and it reads:

"In starting out of siding at Cable engine 965 was slipping bad on account of having used up all the sand in dome. Engine had cracked cylinder saddle and was dropping water on the rail. Train was moving when the break in two happened. Pulled out draw bar casting on engine 965 and draw bar on S. F. P. & P. car No. 913."

When I stated that I had used this engine 965 between Bakersfield and Barstow and return I remember that I used it a few days previous to that. I think I used it on October 3d. I suppose the trainmaster's report will show the dates. I don't remember when I last used that engine 965 before October 4, but I am pretty sure that I had it on 3 or 4 successive trips which I made between the 1st and 4th of October. I don't remember when I used engine 965 previous to October 4.

Redirect Examination.

In the report marked plaintiff's exhibit 1, I endeavored to state my conclusions as to the conditions of that engine. Assuming for the sake of argument that there was a leak in the saddle of engine 965, such leak was not of such a nature as would impair the efficiency of that engine or its pulling power. A crack

(Testimony of Fay H. Tibbs.)

in the cylinder saddle would have nothing whatever to do with the pulling of that engine, and such a crack would have nothing whatever to do with the blowing out of the water valve. The crack in the cylinder would not in any way tend to cause the trouble which I encountered at Cable unless it was caused by the water dropping down, and I don't know that that was the cause. When I made out that report I was kind of like a bug that fell on the water. I had to grasp at something to put up some kind of an excuse for that break in two. I did all I could to prevent it and I wanted to give some excuse. I did not want to take the responsibility of the break in two. In other words I was trying to put myself in the clear. I was trying to make a report which could cover every condition which might possibly have made the break in two, and which would at the same time insure the engine being so inspected as to determine what was the actual cause of the trouble. A report such as that which I made, and which has been introduced as plaintiff's exhibit 1, is not supposed to contain an accurate statement as to the condition. It is supposed to contain a statement as to my conclusion as to conditions, and those conclusions that I draw from a given condition or happening might be wrong. My purpose in making such a report is to try to determine the cause of the accident. To make such a report as will enable *to* local officials to determine the cause. In this case the local officials would be Mr. McCully, the trainmaster, Mr. Lent, the road foreman, and the general foreman at the roundhouse, and they turn their files

(Testimony of Fay H. Tibbs.)

over to the division superintendent. All engines of the 900 class slip more or less, due to the rigid wheel base of 9 feet and 6 inches. A wheel base of 9 feet and 6 inches of that rigid character will cause an engine of that class to slip more readily than would an engine of another class, due to the engine running on curves where they may be only two wheels out of the ten drivers that will have a solid hold on the rail, due to the curve. Maybe the other wheels will not have very much of a grip on the rail. I do not believe the engine would slip on a curve on a dry track as readily as it would on a frosty track. During the time I was in charge of 965 on no occasion did a sufficient quantity of steam escape from that engine to in any way obscure my vision until after the water valve blew out. When engine 965 left Bakersfield there was not escaping from the low pressure cylinder or from any other part of that engine a quantity of steam which would obscure my vision. At all times previous to October 4 when I had been in charge of that engine 965 all steam valves, cocks and joints, studs, bolts and seams were kept in such repair that they would not emit steam in front of the enginemen so as to obscure their vision, and my vision was never obscured by steam while running that engine. At all times all the steam valves, cocks and joints, studs, bolts and seams on that engine were kept in such a condition of repair that they would not emit steam in front of the engineman so as to obscure his vision, and there was no steam leak that would bother my vision on the engine at any time while running. At the time engine 965

(Testimony of Fay H. Tibbs.)

left Bakersfield on October 4, destined to Summit, in company with engine 3203, and as a helper for that engine, all of the steam valves, cocks and joints, studs, bolts and seams on engine 965 were in good condition and in such repair that they would not emit steam in front of me so as to obscure my vision. Assuming that there was a water leak as the result of a crack in the saddle, such a water leak as that mentioned in my report designated as plaintiff's exhibit 1, if there was no wind or anything to steer the water either way, it would drop near the center of the track, inside of the rail on the side on which this cylinder was located about 18 or 19 inches. The only time water would drop at that point would be while the engine was standing still. When the steam is in circulation there is no water, because the cylinder would be hot enough and the saddle would be so hot that the steam could not condense and it would be carried off out through the exhaust and through the smokestack, so that there would be no possibility of water dropping except while the train was standing still.

Cross-Examination.

The train was standing still just previous to the time when I undertook to start, and it just had begun to move when the wheels slipped when I started the train. That is when the water dropped on the rails. When I made the report of water dropping on the rails it was supposed to be accurate information to the officials to whom I made the report, and when I stated that it was to get myself in the clear I meant that I desired to try to make it appear that I could

(Testimony of Fay H. Tibbs.)

not prevent the accident—the break in two. I would have to give some cause for those accidents and I was supposed to give the truth as near as I could. I don't know that water on the rail was the cause of the break in two, but I know that I put that in my report to assume that that was the cause. I don't know exactly what the cause was that made the engine slip, whether it was due to the frost on the rail or water on the rail. Water dropped on the rail will have a tendency to make the wheel slip if the rail is wet, and that is true to a greater extent also when there is no sand, and there was no sand at this time. I inspected this engine at Bakersfield, where I gave it an inspection lasting 30 minutes, during which time I inspected all the bolts and rivets in the saddle and all by giving it the "once over" and also by oiling the engine. We have to oil each and every part, and we have a very good outline of the machine when we get it oiled. I also changed my clothes in that time. We are allowed 30 minutes preparatory time. That is, preparing ourselves as well as the engine. We do a number of things in that 30 minutes other than inspecting of the valves and plugs and so forth, as there is a number of things to be prepared. I do not know when this saddle cracked.

Testimony of A. Pecchia.

A. Pecchia, recalled for defendant, testified:

At the same time that I inspected car S. F. P. & P. 913 I also inspected another car on that train designated G. C. & S. F. 4086. What I stated with respect

(Testimony of A. Pecchia.)

to S. F. P. & P. 913 is also true with reference to G. C. 4086. I gave to G. C. 4086 the same character of inspection that I gave to S. F. P. & P. 913, the same inspection coming in and the same inspection going out of Bakersfield, and I found that the G. C. & S. F. 4086 was in all respects conforming to the requirements of the safety appliance act and the orders of the Interstate Commerce Commission promulgated in pursuance of that act, and I discovered no safety appliance defects on that car, and if there had been I would have discovered it if it was in bad order, but it was O. K.

Cross-Examination.

I gave that car the same character of inspection that I gave the other cars. I have nothing on my reports to show that it was defective. I don't remember anything about that car any more than I do any other car. The same as any other car, only I had quite a number of cars on that train with bad order, but those two cars are supposed to be O. K., both coming in and going out. All I know is that I did not find anything wrong about the car.

Redirect Examination.

Had there been anything wrong with either of those cars, or if either of those cars failed in any respect to conform to the safety appliance standards, my inspection was such as would have enabled me to determine, in so far as the eye could see, that they were in all respects conforming, and as far as I could see they were all right to go, both of them. If they had not

(Testimony of A. Pecchia.)

been all right to go, or in a condition to go forward, I would have discovered it.

Recross-Examination.

I know that I inspected car 4086, as I have it on my books. C. G. & S. F. 4086 was 13 cars from the head end. That was my part of the train. And the S. F. P. & P. 913 was 7 cars from the head end. That also was my end. That was their location in the inbound train, from the north. In the outbound train G. C. & S. F. 4086 was 43 cars behind the leading engine, or pretty close to the caboose. I did not inspect that car going out.

Testimony of Roscoe E. Beach.

Roscoe E. Beach, on behalf of defendant, testified:

Direct Examination.

I am night chief dispatcher of the Southern Pacific Company at Bakersfield, and was such during the month of October, 1914. In that capacity my duties are to supervise the movements of all trains over the San Joaquin division of the Southern Pacific Company, which comprises 868 miles, extending from Fresno to Saugus, with various branches. I order out the cars and the power and supervise the handling of the trains in general. I have charge of the trains which are moved over the joint track operated jointly by the Southern Pacific Company and The Atchison, Topeka and Santa Fe between Kern Junction and Mojave. All trains moving over that joint track belonging to both companies were moved under my direction. I am familiar with the methods employed by the Southern

(Testimony of Roscoe E. Beach.)

Pacific Company for the purpose of determining whether or not the draw bars in those trains are sufficient. They do not follow the practice as to stretching trains anywhere on the system that I know of, especially not on the San Joaquin division. I am familiar with their practice of inspecting trains. I heard the testimony of the Santa Fe officials as to the methods adopted by that road whereby trains are stretched for the purpose of affording additional measures for detecting safety appliance defects, and such methods are not in vogue on the Southern Pacific Company; not on the San Joaquin division, anyway. As a railroad man I regard such methods as a wise precaution, very good indeed. I regard that as a method well calculated to detect whether or not draw bars and draft timbers and such connective appliances are sufficient. It seems to me if there is anything wrong with the draft gear or draw bar in any way it would be discovered through stretching the trains. As a railroad man I can't say that I know of any more efficient method ever having been devised for the purpose of detecting those defects. I am familiar with the train sheets showing the movements of trains between Kern Junction and Mojave. During the month of October, 1914. Those train sheets show all movements of all trains, whether Southern Pacific Company trains or Atchison, Topeka and Santa Fe Railway trains, operated over that piece of track during that month. Every train moved between Kern Junction and Mojave. I am able to determine from the train sheets what engines and what engineers in charge of those engines moved over the tracks on

(Testimony of Roscoe E. Beach.)

those particular days and those particular dates. These train sheets are made up as follows: We have a train dispatcher who takes a blank train sheet at 12 o'clock midnight, and whenever a train departs from the terminal he puts down the engine, the engineer, and on the Southern Pacific we put on the fireman's name, but we do not for the Santa Fe trains that operate over that line. He puts down the conductors of the trains, the time the train departs from the station, the number of loads and empties in the train; he enters the time that they depart and he follows it up and shows the time they pass each and every station on the line as he receives that information from the operators on the line at the different stations. The westbound trains are placed on the right side of the sheet, and the eastward trains on the left side of the sheet. Passenger trains and freight trains are segregated. That is, the westward passenger trains are kept separate from the freight trains, and also the same in the opposite direction. The same with the movement of all light engines as well as engines carrying cars. The train sheet is, as near as may be, a photograph showing the condition of train movements at any particular time, and the location of every particular train on the division at that particular time. I have here the train sheets showing the movements of trains over the track in question during the month of October, 1914, and by referring to them I can tell you whether or not engineer Tibbs, in charge of engine 965, made any trip either between Bakersfield and Mojave, or between Mojave and Bakersfield, or between Bakersfield and Summit,

(Testimony of Roscoe E. Beach.)

prior to October 4, also what tonnage the engine was handling. The train sheet of October 1 shows a movement of engine No. 965, in charge of engineer Tibbs. He moved on this train sheet of October 1, 1914, from Kern Junction to Mojave, with 35 loads, 1730 tons. Engine 1986 and engine 1991, as helpers, were assisting Mr. Tibbs, who had No. 965. I know the rating of those two 1900-class engines as I am familiar with the rating credited to engines of the Santa Fe. I must necessarily be, as it is part of my business. The combined rating of the three engines on that train would be 1750 tons, and they were 20 tons light over their established rating, on October 1, 1914. On that trip Tibbs on the 965 and its associate engines made a good run between Kern Junction and Cable. We have no telegraph office at Cable, which is a non-agency station, so I will have to estimate the time he arrived there and also the time he passed Marcel, which is the first station west of Cable. Tehachapi is the first station east of Cable, and there is no way to determine the time of arrival at Cable excepting by determining the time it takes to make the run between Tehachapi and Cable, and that is based on the performance of the engine on the other part of the trip before they reach these places. I try to keep in touch with the progress of the train from the time it gets on the line for the purpose of determining whether or not it is falling down. We know the time it is making at all times. In determining the kind of run the engine made on October 1 we base our opinion on the performance on the mountain from where the grade

(Testimony of Roscoe E. Beach.)

starts. We have to figure out at Caliente. We should figure from the tunnel which starts on the west, but there is no operator. From Caliente to Bealville there was a very good run of 26 minutes. Caliente is the first station west of Allard. He was at Caliente and started from a standstill and arrived at Bealville at to a standstill in 26 minutes, which was an excellent run. He left Bealville from a stop and went to Woodford in 46 minutes, which is also an excellent run. He left Woodford from the side track and passed Marcel in 31 minutes, which is also a good performance. From Marcel to Tehachapi he made the run in 34 minutes, making a total time of 2 hours and 38 minutes, including stops. From Kern Junction to Mojave the distance is 67.9 miles, and he made the run in 5 hours and 45 minutes, which is a good run, better than usual. On October 2 Tibbs went over that piece of track with No. 965, in the opposite direction, from Mojave to Kern Junction. From Mojave to Tehachapi the distance is 20.1 miles, and Tibbs on engine 965 covered it in 1 hour and 35 minutes with the assistance of engine 3202 as helper. The combined tonnage rating of those 2 engines would be 1700 tons, and they had 1457 tons. Tibbs made a trip over that track on October 3 with engine 965. With engine 3202 as helper and also engine 1986. The combined tonnage rating of the 3 engines was 2200 tons, and their tonnage on that trip was 2185 tons. By way of explanation I might say that in loading these trains they make it as near as possible to the tonnage rating of the engine. They don't let it go over. So that they may take a car less

(Testimony of Roscoe E. Beach.)

than the rating. The performance of 965 on that trip between Kern Junction and Summit, judging from Caliente as I did with the other run, was a very good run. All the way up he made running time, deducting, of course, the delays which he had to meet trains and allowing them to pass. At Rowan he was delayed 34 or 40 minutes. He was at Rowan 30 minutes for 110 alone. He had a hot box, which the sheet shows, but it don't say how long that kept him there. At Woodford he was delayed 51 minutes. I am not prepared to say how long he was at Cable, only to estimate it, but he was there first for 115, No. 49, and extra 2642 west bound. He was there for three trains. The total time from Caliente to Tehachapi was 4 hours and 47 minutes, a 3 hour 5 minute schedule, which is what the schedule was at that time. With an hour and 45 minutes delay, so that by deducting an hour and 45 minutes delay from the 4 hours 47 minutes it is shown that he made about 2 minutes better than the schedule time with the train. I have been engaged in dispatching trains as night chief dispatcher in charge of train movements for the Southern Pacific for 4 years, and previous to that I was handling trains for about 15 or 16 years. There was nothing on the sheet to indicate that 965 could not make good, that I have seen so far. I would have to examine closer before I could be prepared to make a positive statement. With respect to the movement of extra 3203 east, Santa Fe 1st 34D, Southern Pacific 1st 252 on October 4 the train sheet shows that engine 3203 was the leading engine on the train and engine 965, in charge of en-

(Testimony of Roscoe E. Beach.)

gineer Tibbs, was the helper engine to help the train from Kern Junction to Summit. The combined tonnage rating of those engines was 1700 tons and the train was carrying 1699 tons, or one ton short of their rating. From Kern Junction to Caliente they consumed 1 hour and 43 minutes, making a run with a delay of at least 30 minutes at Magunden. I can tell by making a check of the train sheet that they met passenger train Santa Fe 111 at Magunden and also Southern Pacific freight extra or light engine No. 4206, causing the delay. With the exception of that time consumed waiting for those trains the train made a good run to Caliente—such a run as I would reasonably expect the train to make. They consumed 1 hour from a stop at Caliente to a stop at Bealville, but they met extra 2702 westbound, which was a Southern Pacific freight train, at Allard. I can't say how much they were delayed by that train; I can only estimate it. I do not know whether 965 was compelled to go on the siding or not. I would have to refer to the train order book to tell that. Allard is between Caliente and Bealville, and it is a non-agency station. The train order book will show whether or not any order was given whereby they were compelled to take the siding. I don't know whether they moved on what we call a "meet order" or a "time order," by which I mean whether they were held for a certain time before the other train, or whether they went on a meet order, under which they were to meet there. Engineer Tibbs in his testimony stated that there was one time table on which he left Kern Junction and another time table

(Testimony of Roscoe E. Beach.)

on which he left Cable. That came about in this way. We had a new time table which took effect at 12:01 a. m. on the morning of the 5th. He left Kern Junction on the old time table, and while standing at Cable it became 12:01 a. m., and, therefore, the new time table took effect and he had to be governed by the new time table. The old time table was 122, and the new one, 123, became effective at 12:01 a. m., October 5th. By referring to my time order book I can tell whether or not any order was given for the 1st 252, which was Tibbs train, as any order for that or any other train is in that book. Engine 3203, aided by engine 965, known as Santa Fe 1st 34-D, from the time it left Kern Junction was designated on my record as 1st 252, and after it got on my line it was compelled to run on a schedule such as we prescribe for freight trains. The Southern Pacific prescribes schedules for all of its freight trains. That is the general rule, although sometimes we run a train extra. A train order book is a record of the movement of trains, each and every order issued to a train being written here by the train dispatcher. It is a record kept by the train dispatchers under my supervision and pursuant to my directions in the usual and ordinary course of business, and these orders are transmitted from his mind or out of his head on this district over the telephone to operators along the line, and as he transmits it he writes it, while in other territories where the telegraph is used he writes it when the operators repeat it. In this instance he writes it as he sends it and he underlines it as the operators repeat the order, and it is word

(Testimony of Roscoe E. Beach.)

for word as the order is sent. The only order affecting 1st 252 as to the meeting at Allard on October 4 was one to the effect that the train was running 5 hours 40 minutes late between Kern Junction and Tehachapi by train order issued at 9:09 p. m. That order reads:

“No. 252 runs 5 hours 40 minutes late, and No. 334 runs 4 hours 40 minutes late, from Kern Junction to Tehachapi.”

I find a meet order where this train which engine 965 was helping had to take the siding to meet extra 2702 west and extra 1645 west at Allard.

(Testimony of witness interrupted by his illness, but after other witnesses had testified, his testimony continued as follows)

The train sheets enable me to determine what were the consequential delays to train extra 3203, 1st 34-D, or 1st 252, as it is described on my train sheet, directly and proximately resulting from the delay at Cable, and to state what time it would have been delivered at Mojave if it had not been delayed at Cable. I can't say what time it arrived at Cable, because we have no telegraph there, but I can estimate that it would be about 11:48 or 11:47, and judging from the time they arrived at Tehachapi, which was 3:05 a. m., they must have left Cable about 2:45 or 2:50, and therefore they were delayed at Cable from 11:50, we will say, until 2:45, which would be 2 hours, 55 minutes, and had it not been for the delay at Cable they would have arrived at Mojave at least 4 hours earlier than they did. The facts upon which I base that conclusion are that they arrived at Cable about 11:48

(Testimony of Roscoe E. Beach.)

or 11:50 and had to meet train No. 115, a Santa Fe passenger train, and train 49, a Southern Pacific passenger train. No. 49 left Tehachapi at 12:09 a. m., and the minimum running time is 6 minutes, so that it would have been at Cable not later than 12:15, which would have permitted extra 3203, or No. 252, to leave Cable by 12:15 a. m., and by so doing it should have passed Tehachapi not later than 12:35 or 12:40 at the latest, and by doing that it would under ordinary circumstances and conditions have met Santa Fe extra 945 westbound at Summit, which is about $1\frac{1}{2}$ miles east of Tehachapi. This Santa Fe extra 945 westbound arrived at Tehachapi at 1:03 a. m., which is evidence that they passed Summit not later than 12:55 a. m. Therefore, if extra 3203 had not been delayed at Cable it would have left there about 12:15 and passed Tehachapi about 12:40 and arrived at Summit not later than 12:50 a. m. Those are approximate figures, and I can not verify them in any way except that is the usual run they made—and by leaving Summit at 12:50 a. m. it is reasonable to believe that the figures on the various runs of trains will bear me out, it would have arrived at Mojave at 1:50 a. m., which is 4 hours 20 minutes earlier than they actually did arrive there, and I base my consequential delay of 4 hours to make it a conservative figure. In other words, the train would have arrived at Mojave not later than 2 a. m., barring unforeseen accidents, if they had been able to leave Cable at 12:15 a. m. I can explain how a delay of 2 hours 25 minutes at one time may cause a train to be 4 hours late in reaching another given

(Testimony of Roscoe E. Beach.)

point by saying that if this train was at Cable *at* it was for 115 and 49, had they been ready to move as soon as 49 passed there, which was approximately 12:15 a. m., they could have proceeded and avoided further delay, because they would not have had to remain at Mojave for passenger train No. 8 and they would have gone into Mojave ahead of trains No. 50, No. 26, and No. 116, No. 117 and No. 7. But when they were not able to move at the time they should have moved there was a consequential delay for those trains, whereas had the train been ready to leave Cable at 12:15 a. m., it would have gone to Mojave and would have met only one train, which would have been Santa Fe 945 westbound at Summit, and by not being able to leave Cable at 12:15 it had to meet the other trains and let them pass. After the train reaches Mojave its movement is directed by the Santa Fe dispatcher, and but for this delay at Cable I would have turned it over to Mr. Smith, the Santa Fe dispatcher, not later than 2 a. m.

Cross-Examination.

In order for this train to have arrived at Mojave not later than 2 a. m. it would have been necessary for it to have left Cable not later than 12:35 a. m. by permitting them to make the maximum speed allowed for freight trains in this territory, which is 18 miles per hour, from Cable to 1 mile west of Tehachapi, and 25 miles per hour from 1 mile west of Tehachapi to 1 mile west of Cameron and 18 miles from 1 mile west of Cameron to Mojave. From Cable to Mojave is exactly 24 miles. The number of this train

(Testimony of Roscoe E. Beach.)

was No. 1st 252, and it was due to arrive at Mojave at 12:01 a. m. on the morning of the 5th of October. These schedules are figured out to permit of the best possible movement of trains leaving at a given time, and if they leave late they encounter conditions that are not encountered if they leave on time, and again, if they leave late and at a certain time they might find better conditions than they would ordinarily under the schedule. Had it not been for the accident at Cable this train should have been ready to leave there by 12:15 a. m., on the arrival of train No. 49, and had it done so it would have met only one train between Cable and Mojave, and that would have been extra 945 west at Summit. Engineer Tibbs was in charge of engine No. 965 on October 1st from Kern Junction to Mojave, and had helper engines 1986 and 1991. The 3 engines are shown by the train sheets to have handled 1730 tons, and their combined tonnage was 1750 tons over the mountain or 20 tons under their rating, and 4 hours 20 minutes was the time consumed by that train in going from Kern Junction to Tehachapi, which was its scheduled running time. On October 2 engineer Tibbs was also in charge of engine 965 in a westerly direction from Mojave to Tehachapi, and he consumed 1 hour 35 minutes—from 11:40 p. m. until 1:15 a. m. On this trip engine No. 965 was on the head end of the train and its helper engine was 3202. These engines handled 1457 tons, which was 243 tons less than their combined tonnage rating of 1700 tons, which is customary with westbound trains. On October 3 engineer Tibbs ran engine 965 between Kern Junction

(Testimony of Roscoe E. Beach.)

and Tehachapi as a helper engine and returned from Summit as a light engine to Bakersfield. On this trip of October 3, engine 3202 was the train engine, or lead engine, and engines 965 and 1986 were the helper engines which assisted the train from Kern Junction to Summit. The combined rating of those 3 engines was 2200 tons and they hauled 2185 tons, which was 15 tons light. This train left Kern Junction at 5:55 p. m. and arrived at Tehachapi at 12:55 a. m., so that it lost 3 hours on the schedule of the train as shown by the time table.

Redirect Examination.

On a 3 hours and 5 minute schedule between Kern Junction and Tehachapi the train which engine 965 was helping on October 3 made the trip in 4 hours 47 minutes after having encountered 1 hour 45 minutes of delay. It ran from Caliente to Tehachapi on a 3 hour and 5 minute schedule in 4 hours 47 minutes, with an hour and 45 minutes delay, and that was over the heavy part of the road, where the maximum grade is 2.2 per cent., and that takes into consideration delay in waiting for trains at Rowan, Woodford and Cable, and also some delays by hot boxes, which are reflected by the train sheet, which does not show the exact delay caused by these hot boxes. The conditions involving the movement of the 965 in a westerly direction on October 2 are not comparable with the eastbound movements of the same engine, for we never get the tonnage on a westbound train out of Mojave, either on the Southern Pacific or Santa Fe, as the preponderance of the tonnage is eastbound. and we

(Testimony of Roscoe E. Beach.)

can't get the tonnage in the westward movement because we have more empties to move westward than eastward and therefore can not get the rating of the engines in the train. Furthermore the grade is shorter by about 20 some odd miles. It would not be customary to lessen the tonnage westbound because the grade is shorter, but because of the amount of empties we move westbound we have to keep within the car limit fixed by what is known as the car limit law, which prohibits handling more than 57 cars with 3 brakemen over a territory with a maximum grade of more than 1 per cent; therefore we keep the trains down to a 57 car limit, and with the western movement of empties we can not get the tonnage in 57 cars. After the delay to extra 3203 at Cable on October 4, it became necessary for that train to make an exchange of orders. Extra 3203, which had engine 965 as helper, was running at 1st No. 252; second No. 252 was a Southern Pacific train, and, under S. P. rules, when 2d 252 encountered 1st 252 at Cable, or found it there, to so say, and could not proceed, it was the duty of 2d 252 to exchange orders and signals with 1st 252 and to precede that train to Tehachapi and there report for orders, and that caused further delay of probably 5 or 10 or 15 minutes. If the 3203 had been ready to leave Cable at 12:15 it would have met only one extra, 945, at Summit, and it would have arrived at Mojave not later than 2 a. m. This is a conservative figure, but after having been delayed at Cable from 11:47 until 2:45 a. m., and after having left Cable at 2:45 a. m., then, from all other delays

(Testimony of Roscoe E. Beach.)

such as were occasioned by taking water or on account of hot boxes or anything like that, they were delayed at Summit 25 minutes, from 3 35 until 5 a. m., for trains 102 and 7, both Southern Pacific trains, at Cameron 50 minutes, from 4 30 a. m. until 5 20 a. m. for 1st No. 251 and 25 minutes for 117, a Santa Fe passenger train. Those are the only delays reflected by the delay report between Cable and Mojave, but before leaving Cable they had encountered 2d 252, which had to exchange orders with and pass this train by reason of its being disabled and unable to move. After 12 15 a. m., at which time this train should have been able to leave Cable, it was delayed 30 minutes on account of being broken in two, thereby pulling the draw bar out, and it was then further delayed by the water plug blowing out in the right low pressure cylinder, and it was also delayed by No. 8 for 20 minutes and by No. 116 for 10 minutes, and for 1 hour waiting for a helper by reason of this engine being disabled to a certain extent and having to have another helper to get this tonnage up to the Summit, and they had to wait for 1 hour at Cable to get this other engine. The engine that came down to Cable from Summit to help the 1st 252 out of there was the train engine of an extra westbound freight train which was coupled to the train at Mojave, and when it got to Summit it was ordered over to Cable to help this eastbound freight train, in which the 965 was coupled, up to Summit. Instead of letting the engine which had brought this freight train up from Mojave return to Mojave my dispatcher brought it over to Cable to

(Testimony of Roscoe E. Beach.)

help clear the line, and that caused a further delay of 1 hour as reflected by the delay report.

Recross-Examination.

This train in which engine 965 was moving was passed while at Cable by 2d 252, which had engines 2612, 4035 and 2657 as helpers for the train engine which was engine 2678. 1st 252 was not necessarily delayed waiting for 2d 252 to pass. They don't have to wait for them to pass, for when 1st 252 is ready to move they proceed, but when the 2d 252 overtakes this train and finds them disabled so that they can not proceed, by the rules they are required to pass the train and precede it to the first open telegraph office and there report to the superintendent and train dispatcher. Rule 94 reads:

"A train which overtakes another train so disabled that it can not proceed, will pass it, if practicable, and if necessary will assume the schedule and take the train orders of the disabled train, proceed to the next telegraph office and there report to the superintendent. The disabled train will assume the right of schedule and take the train orders of the last train with which it has exchanged, and will, when able, proceed to and report from the next open telegraph office."

In practice they do not report to the superintendent personally, but to the train dispatcher or chief dispatcher, who represents the superintendent. When second 252 passed this delayed first 252 the delayed train then became second 252. Engine 945, which was sent down to Cable to assist the train up to the Summit, was moving that day as a regular engine and not

(Testimony of Roscoe E. Beach.)

as a helper from Mojave to Summit. Engine 945 held the orders, but because they sent it to Cable to assist this other train from Cable to Summit I classed it as a help engine. Engine 945 arrived at Summit at approximately 12:55 a. m. after leaving Mojave at 11:20 p. m., having left Kern Junction at 6 o'clock p. m. and arrived at Cable at 11:50 p. m. I would say that first 252 made the regular running time deducting the delays which they encountered, which are what throws any train late. They didn't make the schedule time by reason of having been so delayed that it was impossible for them to do it. They left Kern Junction 40 minutes late at 6 p. m. and should have reached Cable at 9:40, but reached there at 11:50. By ordinary delays in moving trains I mean such as are due to taking water and to the meeting of passenger trains and letting passenger trains pass and meeting opposite freight trains; but it all depends on what time they left their terminal as to what trains they will encounter. If they leave late the railway company knows they are leaving late. The delays which occurred to this train, 1st 252, outside of what I consider ordinary delays, on October 4, after it left Kern Junction and before it reached Cable, were as follows: They were delayed 30 minutes at Magunden for Santa Fe train No. 111. I would figure that as an extraordinary delay if No. 111 was late. It is not uncommon for Santa Fe trains to be late. Then they were delayed 15 minutes by a break in two at Allard, which would be out of the ordinary, and there was some other delay there, as it was shown by the train order

(Testimony of Roscoe E. Beach.)

book that this train had to take the siding at Allard for some westbound freight train. The delay report reflects 30 minutes delay at Allard. That would be out of the ordinary, and the schedule does not provide that 30 minute delay. At Allard meeting 1625 west delayed them 15 minutes, and a broken knuckle on G. C. 4086 caused a further delay of 15 minutes. The 15 minutes caused by meeting an extra train was out of the ordinary at that point, as the schedule does not provide for the meeting of extra trains. Nothing whatever was the matter with 1641. It was merely an extra train, which can not be anticipated, and in a way that was outside the ordinary, as the schedule does not provide for the meeting of an extra train, but only for the meeting and passing of all regular trains. I don't know that extra 1641 was 15 minutes late. It couldn't have been foreseen by the carrier that the train would arrive at Allard at any given time. I don't think The Atchison, Topeka and Santa Fe Railway Company anticipated when its train left Bakersfield that it would have to meet extra 1641 at Allard, but we did as officials of the Southern Pacific Company when 1st 252 left Kern Junction. Outside of the 15 minutes delay due to the broken knuckle on car G. C. 4086 they were delayed at Woodford for passenger trains, but there was no other unusual delay. As the reason for that train being 2 hours longer in making the run from Kern Junction to Cable than it should have ordinarily taken, I would have to give the delay of 30 minutes at Magunden after meeting train 111 and then 1641 at Allard. Outside of that

(Testimony of Roscoe E. Beach.)

regular thing of meeting trains nothing occurred that should have caused this train to have been 2 hours late in reaching Cable outside of the broken knuckle and passenger trains having been late or something like that. In regard to this particular train 1st 252, the train sheet just gives the amount of the rating as shown at the top of the train sheet, which is the ordinary custom. It doesn't say anything about their having full or light rating or anything like that. The only notation on the train sheet is that they had 1699 tons in the train or one ton light of its full tonnage. That is the notation that is made when they leave Kern Junction, the report of the train.

Redirect Examination.

The schedule noted on the time card is based upon the assumption that the train will encounter no delays in its run outside of those shown by its schedule. We schedule these trains for statistical purposes more than anything else, and also to have a tentative schedule on which to operate the train as a convenience to the train dispatcher. It is nothing positive at all. And we make their leaving time at the given terminals as convenient as we possibly can so that their movement will be a good movement between there and the next terminal. In addition the schedules are made of certain length to conform to the agreement we have with the train and enginemen as an overtime basis, etc. The schedule is based upon the experience of years as to what time trains make if they do not encounter any delay, and if we exceed the schedule it may be by reason of delays usually and ordinarily incident to

(Testimony of Roscoe E. Beach.)

the traffic and the fact that a train fails to pass between two given points within the time indicated by that time table is not indicative of the fact by any means that it is not making satisfactory progress. We figure the schedule of a train as the time it makes between Caliente and Bealville, Bealville and Rowan, Rowan and Woodford, and so forth, and if they are delayed 30 minutes on the run we don't take that into account or ask them why they didn't make their running time, if they make it between any two stations. We don't take the distance from Kern Junction to Mojave if they consume 9 hours and ask them why they didn't do it 4 hours better; but if they consume 45 minutes from Caliente to Bealville, which would be too much, we ask them why they were delayed and why they didn't do it better between those two points. That is the only way we can figure why the train is not making its usual run. The schedule shown on the time table is merely to enable me and the dispatchers working under me to tell whether or not the train is properly performing. There is nothing upon the train sheet up to the time the 3203 got to Cable to indicate that it was not properly performing on the night of October 4.

Recross-Examination.

Trains are not supposed to leave stations ahead of the time prescribed for their leaving, and can not leave on schedules ahead of these times. They are not necessarily supposed under ordinary conditions to meet those conditions shown by the schedule, which is supposed to represent some certain train. You may run

(Testimony of Roscoe E. Beach.)

an extra train out of Kern Junction or Mojave and use a schedule of some other train to operate this train on for the sake of convenience, and if it runs on a schedule, whether it is expected to make that time depends on the class of power, the number of cars, and the tonnage in the train and weather conditions. When passenger trains move under regular schedule between stations, they are supposed to leave those stations and arrive at those stations at fixed hours, and if they have the proper power, and not too many cars, and the weather conditions do not prevent them making that time, then they are supposed to be at the different stations at the times shown by the schedule, and they are supposed to have the proper power and the proper amount of tonnage so that they can conform to the schedule, and we make it a point to give it to them if it is possible. When a train loses its schedule time it does not lose its schedule rights merely by reason of having been late on schedule until they are 12 hours late, but after they are 12 hours late they lose both right and schedule. If they are sidetracked for other trains they do not lose either right or schedule unless they are 12 hours late. When 1st 252, or extra 3203, left Kern Junction 40 minutes late I did not expect them to arrive at Cable not more than 40 minutes late, even under ordinary conditions. I did not expect them to arrive there at 9:40 even if they were due there at 9 40 p. m., because by the schedule No. 252 is due to leave Kern Junction at 5 20 p. m. and they are due to meet train No. 111 at Bena. Train 252, the train in question, left Kern Junction 40 min-

(Testimony of Roscoe E. Beach.)

utes late and had to remain at Magunden for No. 111, and on that account was subjected to another slight delay there meeting No. 6206. Had it left Bakersfield or Kern Junction on time it would have gone to Bena for train No. 111 and might have avoided the delay sustained meeting extra 4206 westbound. They were also delayed at Allard on account of breaking this knuckle—this can not be anticipated or foreseen, and the meeting of extra 1645 westbound could not be anticipated or foreseen. But for the delays at Magunden and at Allard, which could not be foreseen, they would not have been subjected to a delay at Woodford for Southern Pacific train No. 25, which passed there at 10:53 p. m. Ordinarily and naturally I would have expected this train to have gone to Marcel for train 25; therefore you can not say this train leaving Bakersfield 40 minutes late—that you would positively know or have any assurance or anticipate its arrival at Cable 40 minutes late. It might arrive there on time or 3 hours late; it all depends on the delays they encounter en route which can not at all times be foreseen. If this train had not been delayed at Cable by reason of the pulled out draw bar it could have left there as late as 12:35 a. m. and arrived at Mojave as early as 2 a. m. If it had left Cable at 12:15 a. m. it might have arrived at Mojave at 1:15 a. m. If this train had left Kern Junction on time, whether it would have had a better run from Kern Junction to Mojave than it did as a result of leaving Kern Junction an hour late depends entirely on the movement of the other train. If each and every train it had to meet was on

(Testimony of Roscoe E. Beach.)

time and there were no extra trains en route to delay it the run would have been made a little bit better, but this is a Southern Pacific schedule, and not an Atchison, Topeka and Santa Fe schedule. The runs of trains are fixed and regulated with reference to the fact that this train should leave at the regular hour instead of leaving an hour late, and in order to make the run prescribed by the time table it has to leave on time. The train in which engine 965 was run on October 3 was No. 252 Santa Fe, which is due at Tehachapi at 9:20 p. m. and arrived there at 12:55 a. m. It made its regular running time from Kern to Rowan, deducting the delays due to meeting trains and the fact that they had a hot box at Caliente and also at Rowan. The train sheet doesn't show exactly the amount of the delay, but there is a note on the train sheet that says "No. 252 Caliente with a hot box." I don't know whether they were delayed between stations or not. On their schedule they are due to leave Caliente at 6:45 and they arrived there at 7 33 p. m. They were late in arriving at Caliente, but they left Kern Junction 30 minutes late and were 48 minutes late in arriving at Caliente, having been delayed 20 minutes at Edison. I couldn't say what caused the delay and the train sheet does not reflect it, but they were at Edison 20 minutes and it might have been local work or setting out or picking up a car or other work, although that is not an ordinary thing for the Santa Fe train, as it is not their usual custom or practice, and I don't suppose it would average one train in 2 days that would have a car set out there. In ar-

(Testimony of Roscoe E. Beach.)

ranging the schedule for through trains they do not allow time for switching at any of those stations as they do for local trains, as through trains ordinarily do not have freight to unload, and, while there might be an occasion when they would have, the schedule would not provide for that. In running from Kern Junction to Tehachapi 1st 252 consumed 3 hours more than the schedule provides for, but the schedule shown on the time table for 252 is merely a tentative draft of running time provided for a Santa Fe or Southern Pacific freight train. We don't know when we incorporate this schedule in a time table whether the Santa Fe or Southern Pacific is going to operate on it. The fact that we receive a train from Kern Junction an hour late would not cause us to expect to receive that train at Tehachapi only an hour late, as it might be 3 hours late at Tehachapi. In other words, the schedule of 252 as shown on the time table merely provides for an ideal movement, and is put for convenience more than anything else. If the engine is not in good shape or is not running good, or if they have all the tonnage they can possibly carry it is more than likely they will be late.

Testimony of Benjamin H. Lent.

Benjamin H. Lent, recalled on behalf of the defendant, testified:

Direct Examination.

As road foreman of engines in the employ of the defendant, I am familiar with the engine which, on October 4, 1914, was in charge of engineer Tibbs,

(Testimony of Benjamin H. Lent.)

known as 965. I am familiar with what has been referred to as a crack in the saddle of that engine, and at that time it was not of a nature nor was it so located as to cause the engine to emit steam in front of the engine man so as to obscure his vision. The effect of the crack in the saddle would be to cause the engine to lose some steam from the exhaust channel when the engine was working, but the steam which it would lose by reason of that crack would not impair the motive power of the engine in the least, because the steam that would escape from that crack had already passed through the cylinders of the engine, had performed its work, and was on its way out through the exhaust. It was what you would call dead steam.

If the crack was such as would cause any quantity of water to leak from the engine, any water which leaked would fall near the center, midway between the two rails—from 19 to 19½ inches inside of the rail on the side of the engine on which the cylinder was located. I cannot understand how any water which that crack could cause to drop would drip after the engine was in motion, as the current of the exhaust would carry the water out. When the steam is in circulation it is performing its function, and after having performed its function it is carried off through the exhaust. Steam would only escape when the engine was working, and not when it was standing still, although there is a bare possibility of a slight escape when standing still if there should be throttle leakage, but the throttle leakage would be independent of the crack in the saddle. I have heard the testimony of

(Testimony of Benjamin H. Lent.)

engineer Tibbs as to the blowing out of a water valve in the low pressure cylinder of that engine. My experience is such as would enable me to tell what would be the effect of the blowing out of the water valve in the low pressure cylinder on an engine of the 900 class as far as its effect on the motive power of that engine is concerned, and I could very closely estimate the effect and I would say that the extent to which the power of engine 965 would have been impaired by the blowing out of a water valve in the low pressure cylinder would be from about 8 to 15 per cent, depending upon the speed of the engine. In starting trains with this class of engine, they are ordinarily started in simple position, allowing the steam from the boiler to enter the low pressure cylinder, and in that position it is doubtful if they would lose over 8 per cent, so that in spite of the blowing out of the water valve my estimate is that there would still remain 92 per cent of the power of that engine in starting. I am familiar with the condition of engine 965 on October 4, of my own knowledge, as near as I could be by coming in contact with all of the engines at frequent dates. My duties which would familiarize me with the engines on that district and their performance possibilities cover inspection of the motive power, as I see it about the terminal and as I have an opportunity to ride them on the road. Engine 965 on October 4, 1914, was in such a condition as would justify the engineer in charge thereof in believing that it could make a run from Bakersfield to Summit as a helper for a Mallet compound No. 3203 pulling a train with

(Testimony of Benjamin H. Lent.)

1,699 tons without mishap, and there was nothing in the condition of the 965 at the time it left Bakersfield on October 4 which, in the exercise of reasonable care, should have caused the engineer in charge thereof to anticipate that it might develop trouble between Bakersfield and Summit. I am familiar with the service which the 965 had performed on the third division previous to October 4, and that service had been satisfactory in every way, and there had been nothing in the past performance of that engine which would indicate that it might develop trouble. Subsequent to October 4, and after the water valve which blew out on that date had been repaired and the draw bar on the head end replaced, the performance of that engine was good. The performance subsequent to October 4, of engine 965 while it remained on the third district, was equal to that which it had been before October 4.

Cross-Examination.

As soon as the draw bar was put back in the front end of the engine 965 and after the water plug had been repaired its performance was perfectly satisfactory. I can't say of my personal knowledge whether or not the water valve had been replaced with a water plug previous to October 4, but I understand from many others that there was a water valve in the low pressure cylinder. Engine 965 was in good condition when it left Bakersfield on October 4th, and I do not remember any time when it gave unsatisfactory service previous to October 4, or subsequent to that date. My office is in Bakersfield. I can't give the date when I made a personal observation of the condition of this

(Testimony of Benjamin H. Lent.)

engine, as I do not always keep records of my movements and of the different engines that I ride. I cannot give any date when I made an observation or personal inspection of engine 965, but I know I observed the working of the engine and the inspection between the time she came to Bakersfield in August, 1914, and the date of this accident. I certainly made an inspection of that engine between August 11, 1914, and October 4, 1914, as there are no engines operating on that district that would escape me for that length of time, but I couldn't say how many inspections I made of that engine in that length of time. I do not remember anything about the date when that inspection was made or how many times I inspected it. I know from practical experience with power that any bad condition on that engine would not have escaped me for any length of time. I did not inspect her on October 4, but I know from working with power that her condition was satisfactory on October 4, 1914, although I did not inspect the engine on that date. So far as my personal knowledge is concerned, if some steam pipe on that engine had burst on October 3, unless somebody had told me about it I would not have known it, but no steam pipes would burst that would get away from all of the organization that had the care of the engines. If the engine had been in that condition on October 3rd and 4th, I would not have known it of my own personal knowledge. The cracked saddle which has been brought up in connection with this engine was known to me before October 3. I knew that crack was in the saddle before Oc-

(Testimony of Benjamin H. Lent.)

tober 3. I also had knowledge of it afterwards, and of its condition. That is as far as I would state in regard to the crack matter. But I know there were no other cracks and I figure that that engine was in perfectly good condition even with the saddle being cracked as it was. She was in condition to do her work satisfactorily. I examined it to see whether or not water could drop on the rail from the crack in the saddle at Bakersfield before October 4, and again afterwards. I would say that there was no water escaping from that crack at Cable on October 4, and falling on the rail, not from any personal observation at that time, but from my knowledge of working conditions of power. I am quite sure that water could not have escaped through that crack in the saddle and fallen on the rail. Weather conditions wouldn't have anything to do with water, but it would increase the vapor, or, rather, the appearance of vapor, due to a leakage of steam. I can hardly understand how there would be water dropping from that location after the engine had started to exhaust and before the engine started to exhaust, there might be a little drippage while she was standing still and the wind might blow it on the rail, but it would depend on the velocity of the wind as to whether it would carry the water 19 inches or not. If water fell on the track it would have a tendency to cause the wheels to slip. I know what the steam pipe in front of the saddle is. The purpose of that steam pipe is to convey from the inside steam pipes or the smoke arch of the engine to the high pressure valve, steam which is used for the purpose of propelling the

(Testimony of Benjamin H. Lent.)

engine. If that steam pipe had been bursted it would affect the ability of the engine to move. I know nothing about that steam pipe in front of the saddle leaking and never knew of any report on it by the engineers and I do not know of my own personal knowledge whether it was or not, Mr. Armstrong is master mechanic of the Arizona division. He is not here. Mr. Grandy is division foreman of the terminal known as Bakersfield. He is not here. The purpose of the saddle is to make an anchoring location for the cylinders and to support the front end of the boiler. The steam pipes in reaching the cylinders go through the saddle in what are known as steam channels. From the low pressure cylinder the steam passes up through the cavity of the low pressure valve, then through a short exhaust pipe connection about ten inches in length to the outside of the saddle, and from there through a channel in the saddle up to the face of the nozzle, and from the nozzle up through the petticoat pipe and out through the stack. I don't remember positively the condition of the engine at the time she left on October 4, and I couldn't answer the question as to knowing directly on that date by my own inspection.

Redirect Examination.

It is part of my duty to know the condition of power, by which I mean the engines, used on my district. My business is to know the condition of the power as far as I am able to know it, but of course, it would be an impossibility for me to reach every engine every day. As road foreman of engines it is part of my duty to keep in touch with the condition of each

(Testimony of Benjamin H. Lent.)

engine that may be called upon on my district to perform service. I knew that this crack in the saddle of engine 965 which has been referred to existed and I also knew that that crack was not such as would in any way tend to impair the performance of that engine. I did know that that crack was of a nature which would not be apt to cause that engine to slip. I heard the testimony of engineer Tibbs as to the engine slipping on leaving Cable and leaving Allard, but as the result of my experience in charge of motive power, the slipping to which Tibbs has testified was not due in any measure to the crack in the saddle. I would not attribute the slipping to that condition but I would naturally attribute the slipping of an engine of the 900 class, in the event that it did slip, to her long wheel base of 19 feet and 9 inches which is longer and more rigid as compared with that of the Mallet. The Mallet engine is in reality two engines coupled together by a flexible joint in the center between the two engines and so there is not the rigidity in the Mallet that there is in the 900 compound. In the Mallet engine we have 16 feet and 6 inches of rigid wheel base, while in the 900 we have 19 feet and 9 inches and that extra three feet of rigid wheel base would be more apt to cause the 900 to slip than the Mallet. There was nothing in the condition of engine 965 which might be expected to cause water to drip on the rail. In my inspection of the engine, both before and after October 4, it was standing still and very light drippage—just an occasional drop of water was falling. I measured the distance from the rail to where the drip hit the ground,

(Testimony of Benjamin H. Lent.)

and it was 19½ inches. That crack was on the left side in the left exhaust channel within 19 or 19½ inches of the inside of the ball of the left-hand rail. After October 4, I saw a copy of Tibbs' report which has been introduced as Plaintiff's Exhibit 1, assigning a cause for that delay and it was subsequent to that happening that I made the measurements I speak of. From the results of my experience with locomotives, the trouble which Tibbs has testified to as having occurred at Allard and again at Cable was not in my judgment due in any way to the condition of the saddle to which I have been testifying.

I recently made the measurement to which I have testified to determine the location where the water would fall and the investigation which I was pursuing at the time was to determine just how bad the crack had become or how much steam it was losing and as a result of that investigation I am prepared to testify that Tibbs' conclusion that the crack in the saddle allowed a sufficient quantity of water to escape to cause the slipping, is erroneous.

Recross-Examination.

This last investigation to which I have just referred and the measurements were made last Sunday. The slipping of the wheels on that particular type of engine was largely due to its long wheel base. By that I do not mean the large circumference of the driving wheels. The rigid wheel base to which I referred covers the drivers of the engine which are connected by rods. That engine has five pairs of driving wheels and in rounding curves engines with a long wheel base

(Testimony of Benjamin H. Lent.)

naturally bind somewhat on the curvature. The front and rear wheels are running on the worn portion of the driver—the portion where they have a good grip—and the remaining drivers, due to binding, are inclined to ride up on the rim or unworn portion, giving it a very narrow bearing. Whenever reference is made to the “rigid wheel base” of a locomotive it means the portion of the engine from the point where the front driver rests on the rail to the point where the fifth driver rests on the rail and that that is what caused engine 965 to slip. Those engines are much more slippery than any other class of engines which we use on that particular piece of track, and the slipping is principally due to that long wheel base that I have described. The slipping of engine 965 was due entirely to the long wheel base. Their excess slipping over other classes of engines is due to the wheel base and that was the cause of the slipping of the wheel on engine 965 on this train and in my opinion there was no other cause. The tonnage of the train would affect that engine the same as it would any other of that class or any class. If an engine had more tonnage than it could pull, it would naturally stand still and slip all the time unless you had power enough to revolve the wheels and overcome the friction, and if it had no sand it would be more likely to slip. More things than one have to do with the slipping of the driving wheels. Power and the absence of sand controls on any engine. We knew when engine 965 left Bakersfield that it had that long wheel base. It had the same wheel base on the 4th that it had on the 3rd and on the 2nd

(Testimony of Benjamin H. Lent.)

of October. It had the same wheel base on all those dates, but I was not present and do not know about the traction on those other dates or whether the wheels slipped. According to the testimony which the Southern Pacific chief dispatcher gave yesterday, engine 965 got along fine on these other days. It did not have any slipping of the wheels, got along well and made good time. This train got along well on October 4 with the exception of time lost by stops which would not be accounted for in any records which the train dispatcher would have. Trouble with the slipping of the wheels—when they start the train, or like that at Cable—when they are starting the train or delays as a result of the slipping of the wheels the draw-bars pulled out would not be accounted for by the records kept by the Southern Pacific dispatcher.

Redirect Examination.

Engine 965 was such an engine as had been habitually used in hauling trains between Bakersfield and Mojave without mishap. There was nothing in the previous performance of engine No. 965, or other engines of the 900 class, which would cause me to believe that it would slip to any greater extent than all engines slip between Bakersfield and Tehachapi, although I would expect engine 965 to slip more than engines of the other classes. All engines slip regardless of their class and that is more true when they are going up hill. The fact that an engine slips does not indicate in the least that it is unfit for use on the track where it slips. An engine fresh from the shops is just as apt to slip as one which has been in the service for a considerable

(Testimony of Benjamin H. Lent.)

time, and slightly more so. When it is absolutely fresh from the shop, or entirely new, an engine of the 900 class moving on a level stretch of track on the desert might slip on the curves, at low speed or while developing full power and the fact that an engine slips is no indication that it is not properly performing the service expected of it. Outside of engines such as are operated on some foreign roads and on some roads on the North American continent, up steep grades by means of cog wheels, there has never been any engine invented which will not slip. Thereupon the Government admitted that as the usual and ordinary results of railway operation, it very often happens that engines slip.

Recross-Examination.

We reasonably expect an engine to slip as all engines do. The same curvature was there on the joint track when the train started from Bakersfield as when it arrived at Cable. I have been engaged in the operation of locomotives over that hill for five years in December, and as the result of my experience during that time we usually and ordinarily expect what we call in railroad parlance cold weather or what we term bad weather conditions on the mountain districts from the latter part of November to the latter part of February. I have never known of such conditions to develop as early as October and I have no recollection of weather such as we had on October 4 having come during October in other years. Personally I have not inquired into how cold it was on the night of October 4, but I understand the Government weather record of Tehach-

(Testimony of Benjamin H. Lent.)

api shows a temperature of 36 degrees or four degrees above the freezing point. These engines all have a rating. That rating shown on the rate sheet you have does not cover the entire season and it does not show the rating which engine 965 had that night. We had a published rating contained in a rate sheet which applies until in our judgment the weather becomes of a nature that requires a reduction. The rate sheet which you have was revised January 8, 1914, and I suppose it went into effect as soon as distributed to the terminals and bulletin books. In January it is colder than it is in October on Tehachapi Mountain. That rate sheet shows the tonnage rating of engines of the 900 and 1600 class between Bakersfield and Tehachapi at 750 tons, and it shows the tonnage rating of engines of the same class at 3000 tons between Mojave and Barstow and 2215 tons between Goffs and Needles. When I say that the tonnage rating would be reduced during cold weather, I mean that it has been our custom in the operating of the third district to reduce the tonnage rating of engines of the 900 class 50 tons per engine whenever the weather conditions get bad. That reduction does not customarily take place at any particular time of the year because we are governed by the weather conditions that come up. The tonnage rating of an engine is determined as the result of experience with engines of that class in hauling trains over grades of a given percentage. Experience with engines of a particular class and the known past performances of engines of a given class is very largely the practice resorted

(Testimony of Benjamin H. Lent.)

to nowadays in fixing the tonnage rating of engines. In the past years it was sometimes determined by a test with a dynamoter car showing the draw-bar pull of each engine. An engine is turned out of the factory with a certain tonnage rating based upon what it can do on an absolutely level stretch of track. When turned out of the factory the tractive power of an engine is figured from the different items or measurements such as cylinder dimensions, steam pressure, and so forth—which give its tractive effort, and a certain tractive effort is figured to pull a certain number of tons up a certain grade. That is the method of calculation and thereafter we determine by dynamoter experience and actual performance what is its proper tonnage rating for a given district and we re-adjust our rating as experience demands.

Recross-Examination.

After our tonnage sheets are made up by the operating department they are circulated to the different yard masters and different officials as a guide to the rating of those engines from that time on until changed. I would estimate after the rating sheets are made out they would probably reach the different terminals in a week. The rate sheet is a direction to the employes as to the amount of tonnage to be hauled by certain engines over certain districts unless it is countermanded by a bulletin from the train master. I know that the rate sheet you have was countermanded as our tonnage is always reduced in the winter months, but I can't say when it was countermanded, we have other tonnage sheets. The sheet

(Testimony of Benjamin H. Lent.)

you have was not countermanded by a subsequent tonnage sheet, but by a subsequent bulletin. The usual procedure resorted to is the procedure that when the weather conditions become unfavorable the train master of the division goes to his different yard masters and to his conductors and tells them that the rating will be reduced to a certain number of tons for the future. That is the train master's business and I have nothing to do with it.

Testimony of J. B. McCully.

J. B. McCully testified on behalf of defendant:

Direct Examination.

My name is J. B. McCully. I reside at Bakersfield, California, and am trainmaster on the Santa Fe. I have been working for the Santa Fe in that capacity for ten years. I worked on the Milwaukee and Great Northern and Chicago & Great Western before I came with the Santa Fe and had worked for railroad companies prior to my employment with the Santa Fe for about 13 years. Since then I have been the train master for 10 years. The general conditions of moving freight traffic from Bakersfield over to Summit and Mojave, the means by which it is conducted, the helpers usually used in handling trains and a general idea of the conditions there are as follows:

We have a grade that runs 116 feet to the mile; an engine of the 950 class would take approximately 10 loads of ordinary freight, although we have some power that would take less and some that would take more; when they get to the top of the hill, at Summit,

(Testimony of J. B. McCully.)

an engine that would take 750 tons up to the top of the hill would take 3000 tons from there 100 miles on, to the terminal, Barstow, so that we give that engine out of Bakersfield helpers to help them shove the train to the top of the hill in order to get somewhere near our 3000 tons—we never get to it, but near it—so as not to waste the power; we sometimes have two engines helping, and sometimes three, depending on the amount of business there is to move and the number of engines we have to move it with. We couple one engine on the front, and if we have a two-engine train the other engine is back toward the rear, depending on the make-up of the train, whether they are loads or empties—the physical condition of the traffic. If we have two helper engines, one is cut in towards the middle and one behind that again. 45 freight cars loaded is all we can run in one train over the Tehachapi. I have been at Bakersfield during eight years as train master, during which time I have noted the manner in which freight is moved over that piece of track and I was familiar with the movement on the 4th of October, 1914, of the train in question, although I was not on it, and with the movement of all other trains on that date. I had personal knowledge of and experience with engine 965 in connection with my duties as train master, prior to October 4, 1914, as my duties are to watch the performance of all engines and all trains, and where an engine or train or a group of engines are not making what we term schedule time, that is, the time that we allot to them to make the run, I investigate and find out why. I had never

(Testimony of J. B. McCully.)

been called upon to make an investigation nor was my attention directed in any manner to any deficiency on the part of engine 965 prior to the 4th day of October, 1914. And from my experience with that engine and the trains which it had pulled prior to that time, there was nothing to cause me to suspect that trouble might be encountered in the immediate future by the use of that engine in a train either as a lead engine or as a helper. On the 4th day of October, 1914, when engine 965 was used in connection with the movement of the train extra 3203 or 1-34 D from Bakersfield to Barstow—there was nothing with respect to that engine on that date which would lead me to believe or cause me to suspect that the engineer or other operatives might encounter trouble with that engine during the trip. In a general way my duties are, as train master, to employ the men and examine them as to their knowledge of all rules, both train rules and Government rules, with which they must comply, and see that they do their duty, assist them whenever possible, investigate failures of trains to perform their duties and to supervise the traffic generally. I keep in touch with the movement of trains over my division and check it daily to see what the performance of my trains is and in that way I become entirely familiar with the movement and operations of trains on the division over which I am train master every day. The movement of trains over the track operated jointly by the Santa Fe and the Southern Pacific between Kern Junction and Mojave is handled by the Southern Pacific dispatcher at Bakersfield, but from Mojave to Barstow

(Testimony of J. B. McCully.)

such movement is handled by the Santa Fe dispatcher from Needles, so that on my district which is known as the third district, I have two such dispatchers,—one at Needles and one at Bakersfield. Mr. Beach, who was on the stand yesterday, has jurisdiction with respect to the movement of trains from Kern Junction to Mojave, while the dispatcher at Needles has jurisdiction between Needles and Barstow. I am familiar with the tonnage rating of engines and locomotives on my division. There are modifications of those ratings due to cold weather or unfavorable weather, and in case of a severe or violent storm, a condition that probably comes up once or twice in a winter, the Southern Pacific dispatcher at Bakersfield would advise me or my office as a matter of routine. The result of my eight years of experience on this particular division with respect to the time of the year when we may expect cold or unfavorable weather is we look for our bad weather the latter part of November and first of December, but at times it runs along into February, and in my experience I have never known the cold weather to set in as early as October. We sometimes modify the tonnage rating of our engines as a necessary precaution. Our tonnage rating from Caliente up to the top of the hill, Summit, is one that I agreed upon with through the Southern Pacific officials. We want our freight trains to move between given points in a certain number of minutes, and we agreed between us that we would make our tonnage so that they could make this movement. The traffic is heavy, and therefore we have to give them a little less tonnage

(Testimony of J. B. McCully.)

than they could take if it was double track and we could have slower movement; so the tonnage we have adopted is not what the engines could pull, but it is what they could pull and make this speed that we try to make. I have never found it necessary to reduce this tonnage rating during rainy weather. In order to keep our tonnage rating within conservative bounds, we give engines of the 900 class a tonnage rating of 750 tons between Bakersfield and Tehachapi and then from Mojave to Barstow 3000 tons. This wide variation between 750 and 3000 is applied to this same engine between these different points because from Caliente to Tehachapi there is a continuous grade of 116 feet to the mile. When they get to the summit, which is at Tehachapi, then we have 100 miles of a down hill, level, or very slightly ascending grades, and an engine of this class will pull 3000 tons over this territory, due to the lesser grade, and the variation is due to the grades and to the general conditions of the country between those points, and these ratings are predicated upon experience in connection with the movement and operation of trains over the territory. The ratings shown on that sheet which shows the ratings for engines of the 900 class between these points would be a very conservative rating especially between Caliente and Summit, up the mountain, and it must be inferred that those are the maximum ratings to be applied. No better method has been devised for the purpose of coupling trains and hauling them than by means of the draw-bar and I know of no better method by which to test and determine the

(Testimony of J. B. McCully.)

condition of the draw-bars in a train than by "stretching" the train in the manner testified to. There is no other practice of which I have any knowledge or with which I am familiar that is pursued by other railroad companies that is superior, in my judgment, in determining and testing and inspecting the draw-bars than that of "stretching" the train, and I know of no other method which would in my judgment be practicable or reasonably accurate, to determine the condition of the draw-bars in the train at a terminal. An inspection which would show absolutely whether the rivets were out or not would not be practicable, because you would have to chip off the ends of the rivets. You could see by looking at the car if the rivets were out and gone, but in this test they make they can see that when they stretch the train and that is why we stretch it, to bring out all those features. For the observation of the inspector when this system of inspecting is performed, they stretch out all the draw-bars, and if there is any defect there it is more readily detected than if they were shoved in or in normal position. They stretch the train before the inspector goes along and examines it. It would not be practicable in the operation of a railroad, at the terminal, to make any other kind of inspection or to take the parts out and to look at them and to make a visual inspection of each part to determine whether it was in proper condition. In the practical operation of a railroad I know of no practicable inspection other than those that have been made along the lines of the Santa Fe in this section which could have been

(Testimony of J. B. McCully.)

made to determine the efficiency or condition of these appliances.

If any other inspections were made what would be involved thereby would depend on how much of a detailed inspection you went into. If you undertook to satisfy yourself to a certainty for instance, that the yoke rivets were not broken you wouldn't move very much fruit out of Southern California.

Cross-Examination.

We stretch the train to aid the inspector in determining whether or not there are any defects. The train comes to a stop in the yard, and the brakeman sets sufficient brakes on the rear and gives the engineer a signal to move slowly, and the engineer starts and moves until the train is stretched and then sets his air and stops. As great force is not thrown on the draw-bars of the engine in that system of stretching as is thrown on those draw-bars in going up a hill when you have your full tonnage, we have other inspections than merely the stretching of the train incidental to its inspection. By close inspection an employe can tell whether or not a rivet head is broken off and if the rivet head is broken off he would see that it was gone. Whether the inspector has to get down under the car to determine that as to each particular draw-bar whether any rivets are broken depends on the make-up of the car. Take a Union Tank Line car and I don't believe that would be necessary, but that is out of my line as I am not a car inspector. I don't know whether an inspector would have to put his head down under where he would see the conditions as to the

(Testimony of J. B. McCully.)

fastening of a draw-bar into the car to determine whether or not it was in good condition. While I am not a car inspector, still every time I go along a freight train, I inspect it, no matter where it is, and I have become so that I can just walk right along and glance at a car, and if there is anything missing, or anything out of the usual, I invariably detect it. It is a custom, I guess; you get in the habit of it. By walking along the side of a car, without stooping and looking in there, I cannot tell whether or not the heads of the rivets are on the draw-bar that hold the draw-bar in, but if I were making a draw-bar inspection, like the car inspectors, I would do as they do. The Government provides a hand-hold on each end of the car, and the inspector always uses that hand-hold and gets down and looks. What caused the pulling out of the draw-bars in the train drawn by engine 965 on October 4 at Cable was that the slack ran out of the train. Take a train of 43 cars, as that was, going up a 116 foot to the mile grade, and just as soon as you stop exerting power to shove that train up the hill it wants to roll back down and if the head engine should slip it would roll back, and if the helper engine would slip it would want to roll back. If the helper engine slipped and the lead engine wanted to go ahead, you would have a run of slack in between and undue stress would be placed on the draw-bars located where this run of slack occurred. The slipping of the engine would have something to do with it for if the engine slips it is not shoving anything. What caused the trouble at Allard was that they encountered a

(Testimony of J. B. McCully.)

frosty rail and slipped down and broke a knuckle. I should think that the slipping of the engine had something to do with the loosening of the draw-bar on the front end of 965 for it would give it undue stress there, the same as any other draw-bar in the train and that also had something to do with the pulling out of the draw-bar in car S. F. & P. P. 913, for when the pilot draw-bar of the helper engine broke and there was immediately a very severe application of air on the entire train which caused all the brakes to set instantly and as it took several seconds for that to pass up to the engine on the head end, it probably pulled that draw-bar out, due to the first brake. I attribute the break to the fact that the engine slipped, but I cannot say whether any weakness or defect in the draw-bars caused it, as I haven't examined the draw-bars and was not there when the train broke in two so that I would attribute it to the slipping of the wheels of the helper engine on the track and to the fact that the lead engine did not slip. I am fairly sure that I made a report as to the cause of this trouble. I close out all accidents, break-in-twos, delays, in a report to my superior, the superintendent, which would be in the form of a letter to J. A. Christie. My report would be based upon information that I received from the men involved, and what I investigated myself and found out. It would be a compilation of facts communicated to me by others and in this case it would include the facts contained in the 1178 report by Engineer Tibbs. I gather this 1178 with a similar report on the 810 form, as we call it for convenience, pin

(Testimony of J. B. McCully.)

those together and write a letter to my superintendent giving him a synopsis of the case which I call my close-out and then he makes out his close-out on form 1573. The substance of my report to Mr. Christie is contained in that which has already been introduced in evidence as Plaintiff's Exhibit No. 1, which is the report covering the pulling of the draw-bar out of engine 965 made by Engineer Tibbs.

Redirect Examination.

I have issued instructions in the past on my district for the reduction of tonnage rating due to inclement or unfavorable weather, within the past year. I usually put a bulletin in the bulletin book—giving the yard masters and agents at our terminals a copy of it, saying that, commencing today, we will apply the winter rating. That only applies to one particular class of engines as we have no winter rating for other power which is all the same and we are not hauling the maximum. I can recall no time in my experience as train master when I was called upon to issue such instructions as early as the month of October of any year.

Recross-Examination.

When I testified that our tonnage rating is a conservative rating, I meant that there are 17 tunnels on the grade from Caliente to Tehachapi, and in order to go through those tunnels quickly and also to conform to the agreement I had with the Southern Pacific officials to make a certain fast speed over this single-track railroad, we do not give the engines every ton they can pull. They can pull more tonnage by making

(Testimony of J. B. McCully.)

slower speed. The tonnage of the engine is what she is ordinarily expected to haul and make a certain speed over a given piece of track, and when I say that the rating of a 900 engine is 750 tons from Bakersfield to Tehachapi, that does not mean that they shall not undertake to haul more than that many tons to Tehachapi. From Bakersfield to Caliente is practically a water grade and Caliente is halfway to Tehachapi, and though it says that the total rating is 900 tons, that does not mean that the conductor shall not start out to Tehachapi with more than 900 tons for that engine. While that tonnage rating sheet shows that our tonnage rating for a 900 engine is 750 tons from Bakersfield to Tehachapi, that does not mean that the employes in charge of an engine shall not undertake to haul more than 750 tons with that engine from Bakersfield to Tehachapi; it means they can haul all the engine can haul from Bakersfield to a station called Ilma; which is where a heavy grade starts in, but from Ilma up to Tehachapi the limit is 750 tons over the controlling grade, and that they shall not undertake to haul more than that, but we expect them to haul whatever they can haul in an extreme emergency, although we would not give them any more tonnage than that to handle, and did not in this case, as Evans reduced his tonnage before he left Bakersfield in order not to have more than 750 tons for this engine over the mountains. The operating rules say that where the geography of the country is such that they can haul more, they are expected to haul it, and the reason Conductor Evans reduced his tonnage at Bakersfield to 1699

(Testimony of J. B. McCully.)

tons was that the combined rating of the two engines was 1700 tons, so he came as close as he could to it.

My report to Mr. Christie to which I referred as my close-out on the incident relative to the delay of 965 on the hill was based on the report of the conductor and the engineer, and is in the shape of a letter dated at Bakersfield, October 20, addressed to Mr. Christie, reading as follows: "Herewith break-in-two reports covering accident Cable 12:20 a. m. October 5. Extra 3203 east, helper engine 965, conductor J. A. Evans, engineers J. P. Shumate and E. H. Tibbs. 41 loads, two empties, 1699 tons, draw-bar casting pull out of engine 965 and draw-bar out of S. F. P. & P. 913, resulting in \$30 to engine and \$15 damage to car.

"This was the same train that had the trouble starting at Allard; at Cable when endeavoring to start train on frosty rail engine slipped badly. Engine 965 slipped all the way up the mountain, only handled about 2/3 rating. No doubt slipping back and forth all the way up the hill is what loosened castings on pilot of engine 965 and they let go when trying to start at Cable. This resulted in draw-bar pulling out of S. F. P. & P. 913. Recommend case to be closed without assessment of discipline." (Defendant's Exhibit A")

The customary and ordinary run of the crew of the freight train starting from Bakersfield is to Barstow, which is the point where that crew would naturally take the train. Trains operating between Bakersfield and Barstow are moved under the direction of the Santa Fe dispatchers between Mojave and Barstow, also between Bakersfield and Kern Junction, a distance

(Testimony of J. B. McCully.)

of less than two miles, while between Kern Junction and Mojave those trains are moved under the direction of the Southern Pacific dispatcher.

Cross-Examination.

In my letter (Defendant's Exhibit A) I do not say that the engines were handling $2/3$ of their rating. It says that engine 965 only handled about $2/3$ of the rating. I did not say "the engines" and what I mean by engine 965 handling only $2/3$ of her rating is that the engine, after taking siding to meet opposing or superior trains, would slip in starting and when an engine is slipping she is not handling her rating. That is due to many different things. If the engineer opened the throttle too wide she won't handle as much as if she was not opened up quite as wide, and I reached the conclusion that she was only handling $2/3$ of her rating from the engineer's report and the conductor's report. The helper engine that assisted Extra 3203 up the mountain after the break-in-two, was engine 945, Engineer Underwood, which is an engine of the same class as 965, but a different number. From Cable to the top of the hill, after the break-in-two, the train had three engines. I did not say that 965 was only handling $2/3$ of her rating because of its condition. I did not mention its condition, but said it slipped all the way up the mountain and only handled about $2/3$ of its rating, meaning that it only handled that amount when she slipped, but I do not mean to infer that the engine was slipping all the time, because if she had she could not move up the mountain at all. Nobody would be able to figure that when she

(Testimony of J. B. McCully.)

was slipping she would only handle $2/3$ of her rating. My letter said "about" and I was giving him simply a general idea and intended him to understand it was a frosty rail and possibly old dry oil had loosened up due to the frost, and every time she went to the top she would slip down and in that way cause a surge in the train and meant that that engine was only doing about $2/3$ of what she should do under ordinary circumstances at times when she was starting; but not when she was moving along between stations.

Testimony of J. B. McCully.

J. B. McCully was recalled by defendants, and in answer to a question by a juror, testified:

I am familiar with the alignment of the trackage and side tracks at both Allard and Cable where there is considerable of a grade, and as to the alignment at both places there is a curve which runs about ten degrees; that is the extreme.

Testimony of J. P. Shomate.

J. P. Shomate testified on behalf of defendant:

Direct Examination.

I was the engineer in charge of engine 3203 on October 4 and was pulling a train known as extra 3203, and first 34 D on the Santa Fe road easterly from Bakersfield. At the time I left Bakersfield I did not know of anything whatever in or about that train or in or about the track over which I was to travel that would cause me to be delayed in reaching Summit. Throughout that trip as far as Cable I handled my

(Testimony of J. P. Shomate.)

engine with care and in accordance with the operating rules of the defendant, and I have no reason to doubt that Engineer Tibbs did his. If Tibbs had been doing otherwise than handling his engine properly it would have been communicated to me, as engineer of the head engine and I would certainly have realized that he was not handling it right up to the handle. As engineer of the head engine I can get a good idea whether or not there is any "bonehead" work going on back of me. I have been pulling an engine seven years for the defendant company between Bakersfield and Barstow, and some between Needles and Barstow and Needles and Seligman, but most of the time I have operated between Bakersfield and Barstow and am familiar with the hill over the Tehachapi Pass and with the time of the year when we can usually and ordinarily expect to encounter cold weather at any point on that hill. As to the time of the year when we reasonably expect to run into cold weather, we predict our cold weather over there to start from the fifteenth of November on and we hardly ever look for it earlier than that. I have never known of cold weather which would cause frosty rails as early as the 4th of October and I do not believe I have ever seen it turn in cold at that time of the year and stay cold. I remember having encountered a very frosty rail at Cable on October 4, 1914, on this trip in question, but other than that trip I cannot recall having ever encountered any cold weather as early as October, which might cause an engine to slip, during my seven years' experience on the hill running an engine. On October 4 we had

(Testimony of J. P. Shomate.)

trouble as we were pulling out of the siding at Cable. When I, as engineer on the head end of the train, got into the siding at Cable as far as I desired to go, I shut the throttle off on my engine, which was on the head end, and the helper engine was still left in a working condition, and she shoved the slack up on me and I applied the air and stopped the train. When all opposing trains had arrived and we were ready to go, I sounded the whistle, which gave the brakeman a signal to let off his hand-brakes that he had set, and when Tibbs, the second engineer, answered my whistle by whistling off I am in a position to know that he was ready to go and that the brakes were off. He whistles off and answers me, and then I know that he is ready to go. And in this case these things were followed up and I started out. Well, we done quite a bit of slipping in getting this start. I slipped and the 965 slipped and the result was that the 965—when she is slipping she is practically up in the air and she has got an inclination to go on down the hillside of it, and starts back, and I am going ahead, and the jerk of the slack is very liable to cause a break some place at the end of this slack. We were going up grade. The combined slipping gave the train a very severe jerk at the point where this 965 was coupled in, the effect of which was to cause the draw-bar to pull off of the head end of engine 965 which made it necessary to get that engine in position in the train where she could do her work. The pulling out of that draw-bar affected every car to some extent, for whenever a train gets an undue shock like that it is likely to cause a

Testimony of J. P. Shomate.)

defect any place in the train and is very hard on the train. Furthermore it loosened up a draw-bar on a car at the head end of the train and made it in very bad condition so that it could not be handled where it was. Previous to and at the time of reaching Cable, and as we were starting from Cable, Engineer Tibbs and I both used due care in the handling of our engines.

Testimony of Herbert S. Wall.

Herbert S. Wall, recalled on behalf of the defendant, further testified as follows:

Direct Examination.

It having been developed by the testimony which I heard that engine 965 had a water valve and not a water plug in the low-pressure cylinder, that would affect my estimate as to the loss of power which resulted from the broken valve, because I would want to reduce the loss of the general efficiency of the engine as given in my statement at 20 per cent, for the reason that the two-inch plug would permit more steam to be relieved from that end of the cylinder while the water valve has only an opening of about an inch and five-eighths, and I believe a conservative estimate would be to figure that the blowing out of the valve would cause a loss of one-eighth, leaving seven-eighths of the power of the engine in serviceable condition and depending upon the speed of the engine, I would say from eight to twelve per cent would be the loss in efficiency due to blowing out the valve. There would not be twelve per cent loss of efficiency with the

(Testimony of Herbert S. Wall.)

engine under full speed, but when starting or working slow such loss would be about 12 per cent which would be reduced between seven and eight per cent as speed increased. Even with the water valve out, you would have a full 90 per cent engine which would be perfectly efficient. I have heard the testimony as to the crack in the saddle of engine 965. Such a crack would tend in no way to cause water to drip from the engine in such a way as to cause an engine of the 900 class to slip, as you would only obtain water in the exhaust cavity when condensation was taking place or while the engine was standing still, when you would only obtain it under a reasonable throttle leakage that might take place. If there was no throttle leakage there wouldn't be any argument about the question of water dripping in that location after the engine had made the first exhaust. In starting at Cable engine 965 moved four car lengths and consequently there would be about 12 exhausts in that distance on that side, or 24 as a total, and after the first exhaust everything would go out and there would be nothing but the exhaust still left, unless the engine was working with possibly a slight amount of water, but I believe it was testified that the engine was working perfectly dry steam, or as near as saturated steam can be dry.

Cross-Examination.

The testimony was that the water valve was broken off and that could have been caused by several things: Something might fly up from the track, or there might be a flaw in the casting that could not be foreseen,

(Testimony of Herbert S. Wall.)

the same as would cause something on an automobile to break off like the crystalization or length of service. There is no way to inspect the location where that water valve broke off without removing the cylinder casing, but the general life service of those water valves is several months service, and it is not an ordinary condition when one breaks. That the blowing out of the valve was not due to worn threads which could have been ascertained by inspection is evidenced by the testimony of Engineer Tibbs that the piece was left in there and that it would be necessary to chip the piece out of the cylinder, although I did not see it and don't know that the piece was in there.

Testimony of J. P. Shomate.

J. P. Shomate was recalled by defendant and testified:

Direct Examination.

At the time the draw-head pulled out of engine 965, the train had moved three or four car-lengths which had put my engine out to a point where it had fouled the main line.

Testimony of G. P. Smith.

G. P. Smith, on behalf of defendant, testified:

Direct Examination.

I am night chief dispatcher for the Atchison, Topeka & Santa Fe Railway Company and from my office at Needles I handle the movement of trains over that part of Mr. Christie's division west of Needles, extending from Mojave to Barstow, called the third district,

(Testimony of G. P. Smith.)

and from Barstow to Needles, called the second district. From Bakersfield to Kern Junction is handled by a staff system and we issue no train orders over that piece of track. Trains leaving Bakersfield are turned over to me at Mojave. The usual time consumed by a Mallet engine with a train of 1699 tons, less one car, in making the trip from Mojave to Barstow, is between four and five hours. We figure on about one hour at Mojave, possibly a little longer, as an allowance for the train and engine men to eat, and for the train ordinarily to fill out, but after they get started they should make the run from Mojave to Barstow with a train of 1700 tons, less one car, which is very light tonnage for that engine and that district, in between four and five hours. I am familiar in a general way with the consist of the train known as extra 3203, or first 34 D, which left Bakersfield on the 4th of October, 1914, as I directed the movement of that train between Mojave and Barstow. My train sheet of October 5th shows that this train arrived at Mojave at 6:10 a. m. and that it reached Barstow at 11 a. m. Had I received that train at Mojave at 2 o'clock a. m., the 5th, having due regard for the conditions prevailing between Mojave and Barstow, it would have probably arrived at Barstow about 8 a. m.

“Q. Are you able to state what movement you may have accorded first 34 D had it not met with a delay at Cable?

A. The movement would have been no better, nor as good, as it was in this particular case, because the delay at Cable, which we took advantage of as an un-

(Testimony of G. P. Smith.)

foreseen contingency to extend the time of this crew, left barely enough time to make the run to Barstow, and allowing the train to go out of Mojave with 1650 tons when their rating is 4000."

Had I received this train at Mojave at 2 a. m. I could have put it into Barstow at 8 a. m. After the train was turned over to me at Mojave it was subjected to further delays between Mojave and Barstow aggregating thirty minutes of which ten minutes was at Mile 782 by the extra gang, and twenty minutes at Hawes, meeting No. 3. Had that train been turned over to me at Mojave at 2 a. m. it would not have met the extra gang as it would have passed Mile 782 before the extra gang went to work and it would have been in Barstow before No. 3 left Barstow. Assuming that the delay of that train into Mojave was due to a cause which could not have been foreseen at the time the train left Bakersfield, there were additional consequential delays to the train amounting to thirty minutes after it left Mojave, for those delays at Hawes and at Mile 782 could not have occurred had the train been received at 2 a. m. After I got that train onto our track at Mojave I expedited its movement between Mojave and Barstow by leaving the tonnage at 1650 instead of loading it up to seventy-four loads or four thousand tons and in spite of that precaution they were subjected to that thirty minutes further consequential delays.

Cross-Examination.

If the train had arrived at Mojave at 2 a. m. it would, between Mojave and Barstow, have met No. 7,

(Testimony of G. P. Smith.)

probably at Solon at about 4:10 a. m. as No. 7 was a little late that morning.

Redirect Examination.

Had I received extra 3203 or first 34 D at 2 o'clock I might have given it a meet with No. 7 and still put it into Barstow at 8 o'clock and would not have subjected it to these other consequential delays of thirty minutes.

Testimony of J. A. Evans.

J. A. Evans, recalled by defendant, testified:

Direct Examination.

It is my custom while running on the third district to change my underwear from light to heavy when the cold weather sets in. That is generally the way we check it up. We have about three climates to contend with. The time of the year, as a result of my past experience on the hill, when I usually put on my heavy underwear, is just about the middle of November. I had not put it on at the time I left Bakersfield on October 4. In that train on October 5 we had potatoes which required me to ascertain and keep in touch with the weather conditions as we progressed on that run. We have instructions when handling potatoes that they shall be handled under ventilation—that the vents of these refrigerator cars shall be left open when the thermometer shows less than freezing and the ice-plugs and ventilation shall be closed when the thermometer shows lower than 32 degrees. We had nine carloads of potatoes in that train that night and by reason of the presence of those nine cars of “spuds” in that train

(Testimony of J. A. Evans.)

I made an effort to ascertain the weather conditions. We always examine the thermometer at Caliente and again at Woodford and again at Tehachapi. I recall looking at the thermometer at Tehachapi when we got there and it was thirty-six degrees.

Testimony of J. A. Christie.

J. A. Christie, recalled by defendant, testified:

Direct Examination.

I have heard the testimony of Mr. Beach—the night chief dispatcher of the Southern Pacific—with regard to the schedule of freight trains between Kern Junction and Mojave, and generally on the Southern Pacific. Schedules or time table showing a scheduled movement of freight trains on the Southern Pacific or on the Santa Fe have little bearing or little influence on the movements of such trains when applied to the movement of such trains from one terminal to another or from one side-track to another. It has some bearing but not very much. To illustrate, the Santa Fe have strung on their time table trains known as 33 and 34. Those numbers are not used at all in the handling of trains on the line. They are used altogether for statistical purposes; for a matter of record in the traffic department and elsewhere. The department which has to do with the actual handling of cars and trains on the road is known as the operating department, and they do not use those figures at all on the Santa Fe—those numbers of trains. On the Southern Pacific they are used on account of some unusual conditions on their lines due to congestion of

(Testimony of J. A. Christie.)

traffic—and the giving of those trains a number as they do, takes with it the authority, according to the rules, to make some movement which signifies their handling. But as far as the time from one terminal to the other or one side-track to another, as indicated by the figures on the time table, it has little bearing with the actual handling of the train. The process of making up a time table by using a string is rather intricate. A board somewhat similar to that blackboard is used with a number of strings crossing each other here and there at points indicating stations by name; the distances between stations and terminals are also on this board, and the movement of a train is followed by following the string which carries the number of the train and by that means we figure out what would be regarded as an ideal movement, but that does not indicate what we would expect in the shape of a movement. Even on the Southern Pacific, where they use those numbers, the time table provides for only one train. It does not say first or second section, or so on, but they frequently use that number to move several trains in sections. What I have stated relates to the freight trains and not to the movement of passenger trains, which we endeavor to have conform more rigidly to the figures shown on the time table, but it is not expected that freight trains will conform to it. The number of freight trains customarily and ordinarily moved over the Santa Fe on my division during the month of October, 1914, varies considerable, but I should say it would average in October 24 or 25 freight trains in 24 hours and 12 passenger trains on

(Testimony of J. A. Christie.)

some districts and on some only 8, and notwithstanding the fact that there were 24 freight trains habitually moved, there was only one freight train shown on the Santa Fe time table in each direction. About ten Santa Fe freight trains on an average were moved each day over the track used jointly with the Southern Pacific, and in addition to that there would be some six or seven light engines moving which had been used for helpers, and they would be moved as a train and yet the Southern Pacific time table only shows one Santa Fe freight train. The Southern Pacific operating officers through the dispatcher pays no attention to the number of that Santa Fe train. He may run a Southern Pacific train on the number which is prescribed for the Santa Fe freight train movement, for convenience of handling. If a Santa Fe train gets into Kern Junction about the time that No. 252 is shown on there, then he runs the Santa Fe train as 252, and if, on the other hand, a Southern Pacific freight comes in about that time, he uses 252 for its number; it depends on the conditions prevailing at that time.

Cross-Examination.

If a Santa Fe train is run on a Southern Pacific train time table, it means that the Santa Fe train in that territory is entitled to all the privileges that go along in accordance with the rules prescribed by the Southern Pacific Company. I suppose it would be expected to make the same running time as the Southern Pacific train would ordinarily make on the same time table, but there are exceptions. The Southern

(Testimony of J. A. Christie.)

Pacific have a fast freight and the Santa Fe have a fast freight, and at times they run around each other on the joint track. If they run on that time table they are guided to some extent by the hours named in the time table. If a Santa Fe train is given the standing of Southern Pacific 252, whether it is supposed to run on 252's time is left in the hands of the dispatcher, who may find it convenient to run two or three hours late and the same would be true with regard to Southern Pacific trains. The same rule applies and we know of no distinction between the movement of the trains of the Santa Fe and the Southern Pacific. We have a schedule of our regular passenger trains and we endeavor to move them in accordance with that schedule as nearly as possible. The dispatcher does not issue regular train orders to a passenger train as he would if it were an extra train, as the rules prescribe the movement of such trains by the issuance of a certain form which is the authority for its movement and trains that move on a schedule merely secure a clearance and not a train order unless the dispatcher sees fit. Unless something interferes with the movement of a regular passenger train it moves on a regular schedule and not on what are generally known as train orders, unless something interferes with its movement and there might be some other train opposite which they wish to move, but the same is not true of a freight train. A freight train which has a regular schedule should move on a clearance card and not on a regular train order, according to the Southern Pacific rules, but I have no recollection of any freight train being

(Testimony of J. A. Christie.)

started on a single track with only a clearance card. If freight trains move on this regular schedule according to the rules, they are governed by it in meeting with other trains and other trains are governed by such schedule in their meeting with this particular freight train. If a regular train like No. 252 is due at Cable or Tehachapi at a certain hour, then other trains that will meet this train and which are inferior to it will be governed by that schedule as to the time they shall meet this 252 at Tehachapi, if it is moving in accordance with the rules, unless the dispatcher has made some changes. It is not necessarily intended that regular freight trains which are moving on schedule shall move as nearly in conformance with that schedule as possible. In the process of moving train 252 from Kern Junction to Mojave, it would probably meet ten or, when business is heavy in some period of the 24 hours, twenty trains. It would be unnecessary—in fact, absolutely useless—to try to maintain that train and move it according to the figures on the time table against a volume of traffic of that kind, a great deal of which, I assume, would be superior. In addition, superior trains have to be given the right in moving in the same direction. It is the intent and purpose not only of the Southern Pacific, but of the Santa Fe and other railroad officers, to move traffic as expeditiously as possible, and if there is a train which they can move on that schedule, all right, but if they have another train that they can move better than that, they will do that also. If a regular freight train was due to leave Tehachapi at 2:35 moving on

(Testimony of J. A. Christie.)

that schedule should be able to reach Tehachapi at 2 o'clock, I assume that they start it out of Tehachapi before 2:35 if it was an important train and could thereby get a better movement, and in that case the dispatcher would have to take up the train orders and make an entire new outline for the train movement. He would have to annul 252 and run it as an extra and it loses its identity as 252.

Redirect Examination.

An extra train might be run on the schedule of a regular train. The conditions under which it can reasonably be expected to move a freight train between Kern Junction and Mojave in accordance with the schedule shown for 252 would have to be very favorable. In the operation of freight trains it often times becomes imperative and often times a dispatcher does hold at any point a freight train which has not been otherwise delayed, in order to avoid congestion to other trains.

Statement by defendant's counsel:

That completes the direct testimony in defense of counts 1 to 6 inclusive of the complaint, which relate to the train running from Bakersfield to Barstow, which has been referred to as first 252 and which is designated in the complaint as extra 3203, and in the answer as extra 3203 first 34 D. In addition to the testimony heretofore introduced, insofar as it may be applicable to the other counts, the defendant will direct particular proof toward its affirmative defense to counts 7 to 11 inclusive:

(Testimony of J. A. Christie.)

Testimony particularly in defense of counts 7-11 inclusive:

Testimony of William Matthie.

William Matthie, called by defendant, testified:

Direct Examination.

My present occupation is trainmaster at Needles on the Santa Fe. I have been engaged in the railroad business about 28 years. I have been employed by the Canadian Pacific, the Great Northern, the Northern Pacific, Chicago Great Western and Santa Fe. I have been engaged as trainmaster of the Santa Fe at Needles for seven years and my jurisdiction extends from Barstow, California, to Seligman, Arizona, with three or four branches embraced in the first and second districts. The distance from Needles to Barstow is 169 miles. As trainmaster I have a general supervision over transportation matters, employment of men in the train service, and also a general supervision of the dispatchers, operators and agents, as well as the train and engine men on the division. Mr. G. P. Smith, who testified yesterday, is a train dispatcher in defendant's employ, working under my direction as night chief dispatcher, in charge of movement of trains under me and pursuant to my direction. I am familiar with the methods which prevail upon the railway lines of defendant for the purpose of testing trains in order to determine whether or not the draw-bars and draught timbers of those trains are sufficient. On the arrival of a train at its terminal a sufficient number of hand brakes are set on the rear

(Testimony of William Matthie.)

of the train, and the engineer slowly stretches the slack all out, after which he sets the air before the engine is detached, as that gives the car inspectors a better opportunity to observe the condition of all the draught rigging and draw-bars, and other things in each car. Between that time and the time when the cars in that train leave, in the event that the train is broken up or the time when the train leaves in the event that it is not broken up, the cars are subjected to further tests or inspection in this way; it has been the practice that when a train is made up the air is put into the train by means of a ground air line and it is then inspected again by the inspectors; and when the engine is attached the train is again inspected by the inspectors as regards the air apparatus and other running gear, and so forth, and it is again stretched. In my experience as a railroad man, I have never known of any method adopted by any road in this or any other country better calculated to determine the sufficiency of draw-bars and draught timbers in a train, and I have never heard of any method anywhere better calculated to make that determination. Between the time the train is stretched when it comes in and the time it is stretched when it goes out, attention to it and the various cars therein is given by the car inspectors. After the inspection has been made on arrival, men are assigned for the purpose of going over every car to endeavor to find defects while the train is standing still in the yards, and it is their duty to go over every car and endeavor to find out anything defective in that car. The purpose of that is to find

(Testimony of William Matthie.)

any defects that may be there, contrary to the rulings promulgated by the Interstate Commerce Commission pursuant to the Safety Appliance Acts. I am familiar with a station on our line known as Danby which is 65 miles from Needles. I am familiar either from my personal knowledge or from reports made to me in the usual and ordinary course of business by those having charge of the movements of that train, with a delay to a train known as extra 955 west at Danby, from 9:10 p. m. to 10:10 p. m. on October 10, 1914. Extra 955 was a west-bound train and was at Danby to meet an east-bound train. This east-bound train when arriving at Danby broke in two and caused a delay to extra 955 west, and to several other trains, that contributed to the entire delay to extra 955. I know of a report having been made by defendant to the Interstate Commerce Commission on a form provided by that commission which purports to be sheet No. 9, for the month of October, 1914, showing employees on duty more than 16 consecutive hours and the explanation for the delay. I am familiar with that report. Such reports are not rendered by me, but by the superintendents and they are based upon information furnished by me. That part of the delay report following the word "explanation" is in words as communicated by me to the superintendent. I recall the circumstances attendant upon that delay very clearly from the reports that I got at the time of this accident, and the report to the Interstate Commerce Commission does not correctly reflect the facts embraced in the reports furnished me and which I based my report to the general superin-

(Testimony of William Matthie.)

tendent, in one respect. The report to the commission states that the accident was caused by the improper operation of the brakes on the part of the engineer, and that was not correct. That report to the commission is usually and customarily made out and forwarded to the commission almost immediately after the accident. This report to the Interstate Commerce Commission of excess service of the train crew is made in the superintendent's office. I do not know in what way they are made, as that is outside of my jurisdiction. I presume that the reports covering one particular month are bound and sent in together, but I am not sure. The date on the first part of that report shows that it was sworn to on the 19th of November, 1914. After the information upon which that report was based was furnished by me to the division superintendent, I made further investigation independent of the facts communicated to me and incorporation in the reports, which developed facts at variance with any facts theretofore communicated. I visited Danby a day or two after this accident.

"The Court: State what you found?

"A. I found a broken knuckle, and in addition to that I interviewed the different members of the crew as to how the train was handled, and so forth.

"Q. By Mr. Burks: Where was the broken knuckle?

"A. It was in a scrap box provided for the purpose of taking care of scrap at Danby.

"Q. Were you able to identify that knuckle as formerly having been on any particular car?

"A. No, sir.

(Testimony of William Matthie.)

"Q. Were you thereafter advised that the knuckle which you found had been on any particular car?

"A. I was advised before I went to Danby that the knuckle was there in the scrap pile.

"Q. Was there any other knuckle in the scrap pile?

"A. No, sir.

"Q. Were you advised as to the car from which the knuckle in the scrap pile had been taken?

"A. I was.

"Q. From what car were you told that that knuckle had been removed?

"Mr. Walter: We submit that that is purely hearsay.

"The Court: That is clearly hearsay.

"Mr. Burks: I think it is probably hearsay. Well, state who told you that there was a knuckle in the scrap pile.

"A. The section foreman at Danby.

"Q. By the Court: What do you mean by "scrap box"?

"A. A box provided for keeping scrap to keep it off of the main line."

I am familiar with the terms and requirements of the act of Congress known as the Hours of Service Act, approved March 4, 1907, effective March 4, 1908, and also with the provisions and requirements of the Safety Appliance Acts. Precautions are customarily and ordinarily taken by me to insure a compliance with the Hours of Service Act by crews operating under my direction, but I can't say that there

(Testimony of William Matthie.)

were any particular instructions issued by me pertaining to the month of October, 1914. The precautions which were being taken by me during the month of October, even though they may have been theretofore in vogue, were set forth in instructions on file in the chief dispatcher's office and those instructions as to the precautions which should be taken were communicated to me by my division superintendent.

Exception Number Four:

Q. I will ask you to state whether or not you know whether in anticipation of the effective date of the Hours of Service Law, which became effective March 4, 1908, the Atchison, Topeka & Santa Fe Railway Company made any changes in methods, practice or properties upon the districts of the division over which you were in charge of train movement, insuring compliance with the Hours of Service Law.

Mr. Walter: Objected to as immaterial.

The Court: That is the same question I ruled on the other day. It will be the same ruling, and you can have your exception.

Mr. Burks: Your Honor will allow me an exception?

The Court: Certainly.

Mr. Burks: If Your Honor will allow me to make the offer to complete the record—

The Court: Isn't it covered by the first offer?

Mr. Burks: Yes.

Exception Number Five:

Mr. Burks: May the record show that I offer to prove by this witness the same facts which I offered to

(Testimony of William Matthie.)

prove by the witness J. A. Christie at the time he was on the stand, showing the changes in methods, practice and properties and the expense incurred in making them to insure compliance with the Hours of Service Act?

The Court: The record may show that same offer.

Mr. Burks: And will the court allow me an exception to the refusal of the offer?

The Court: Yes.

Mr. Burks: I now offer and read into the record, with the consent of counsel for the Government, instead of introducing the original, that part of sheet No. 9 to which the witness has referred, following the word "Explanation," relating to the particular train extra 955, as follows: "Delayed at Danby the 10th from 9:10 p. m. to 10:10 p. m., one hour, account extra 1641 east breaking in two and pulling out draw-bar from D. S. L. 51202, and breaking knuckle on A. T. 86671; this was caused by improper operation of brakes on the part of the engineer. Cars were inspected and in good order at Needles." In the column showing the excess of service, preceding the explanation, there appears, "One hour and no minutes."

(Witness continuing): I did not sign that report. The breaking in two of extra 1641 delayed other trains moving in the same direction including No. 4 which is the California Limited, east-bound, passenger train. The point at which 1641 broke in two was between stations. It was right at the switch at Danby, at the time of heading in the switch, and the effect of the break-in-two was to block the main line, and

(Testimony of William Matthie.)

before traffic could be moved over the main line the bad-order car had to be disposed of and the train coupled up and pulled into the clear on the side-track. In order to dispose of the bad-order car it had to be taken up to the passing track and placed upon a set-out-track or spur track there where it would be out of the way. A train which was on the passing track at that time had to be backed up out of the way in order to make room for the disposal of this bad-order car on the spur-track and when that train was backed up out of the way it blocked the other end of the main line. To refresh my memory, I will have to look at these train sheets which are kept under my direction by the dispatchers operating under me and by referring to them I can state that extra 1641 east left Barstow at 1 p. m. October 10th, and its break-in-two occurred at 8:05 p. m. Extra 955 west reached Danby at 7:30 p. m. October 10th. Extra 955 was delayed by extra 1641.

Statement of defendant's counsel: The defense of these counts 7 to 11, inclusive, is not based upon a break in two of the train whose crew exceeded sixteen hours of service, but upon the fact that by reason of train extra 1641 east breaking in two the crew of this train extra 955 west was so delayed that it exceeded the hours, and the break in two of 1641 is set up in the answer as a defense in the language of the proviso:

(Witness continuing): Extra 1641 east left Barstow at 1:10 p. m. and the break in two occurred at 8:05 p. m. October 10th. Extra 955 west left Needles at

(Testimony of William Matthie.)

2:20 p. m. October 10th and reached Danby at 7:30 p. m., and but for the break in two of 1641, which blocked the main line west of Danby, extra 955 west might have been reasonably expected to leave Danby at 9:10 p. m. Extra 955 west had no regular time for leaving Danby, but it would regularly be expected to leave there had the line not been blocked at 9:10 p. m. It arrived there at 7:30 and would have gotten out, had there been no obstruction there, at 9:10, with a delay of only an hour and forty minutes. Extra 955 west would have been compelled, even had the line not been blocked, to remain at Danby from 7:30 until 9:10 in order to meet at that point No. 4, No. 7, No. 1 and the first and second sections of No. 9, all of which were first-class passenger trains. These were all superior trains, and the first section of No. 9, due at Danby at 9 p. m., carried a railway postoffice car, while No. 1 carried pouch mail. The first train that passed extra 955 west at Danby was No. 7, which was going in the same direction. The movement of train 7 into Danby was delayed by reason of the breaking in two of extra 1641 east for 53 minutes. No. 1 was delayed at Danby by reason of this breaking in two for 32 minutes. First 9 was also delayed, but not at Danby, by reason of the break in two, for 41 minutes at Fenner, and second 9 was also delayed 41 minutes at Fenner. They were running west-bound in the same direction as extra 955. The movement of the California Limited, or train No. 4, was also delayed at Siam on account of this break in two of extra 1041 east for 55 minutes. From my experience

(Testimony of William Matthie.)

in charge of the movement of trains over that district I am prepared to say that but for the break in two of extra 1641 east, extra 955 west would not have been delayed at Danby between the hours of 9:10 and 10:10 p. m., and will say that but for the break in two of 1641 east, train extra 955 west-bound would have been able to leave Danby after having met all the trains which it would have been called upon to meet at that point, and would have followed the second section of No. 9 out of that station at about 9:10. Extra 1641 east, by breaking in two, obstructed the main track west of Danby, and that affected the movement of extra 955 west in this way: 1641 was running from Barstow to Needles, and when it stopped to head in on the side-track for the purpose of meeting No. 7 and No. 1 and first and second No. 9, and also to get out of the way of No. 4, which was following, it broke in two at this switch. That break in two delayed No. 7 and No. 1 at Danby, which in turn delayed No. 4, which was at the next siding behind at Siam. This break in two delayed Nos. 7 and 1, and they having a meet with No. 4 at Siam, delayed No. 4 for 55 minutes; the delay to those trains made it necessary for the dispatcher to hold first and second No. 9 back at Fenner until he could tell when the track would be clear, when he would allow other trains to proceed and meet No. 4 whenever he could determine when it would be advisable to let them proceed. No. 1641 broke in two on the main track as they were approaching Danby and preparing to head in at the west switch onto the side-track to get out of

(Testimony of William Matthie.)

the way. At that time extra 955 west had headed in on the siding from the east switch at Danby to get in the clear for No. 1641, followed by No. 4 coming from the west, and for No. 7 and No. 1, coming behind it from the east. Extra 955 west was already on the side-track at Danby, out of the way of these superior trains, but in order to meet this extra 1641 east, and in order to allow the bad-order car to be put on the spur track, so that the main line could be cleared at the west switch, 955 had to back out and obstruct the main line on the east end. At that time most of the train of extra 1641 east was out on the main line west of the west switch. 1641 was moving from west to east and 955 was moving from east to west. The track at Danby is straight, but it is on a grade of 52 feet to the mile from Barstow toward Needles, which is a 1 per cent grade. The break in two of extra 1641 east was due to the shank of the knuckle breaking in the coupler of car AT 86671. I think it was an R. E. Janney coupler. (Witness refers to model and described the coupler and its various parts and the nature of the break.) The effect of the breaking in two on this car AT 86671, which was back in the train about twenty car lengths, was to set the air in the emergency, and that allowed the whole strain of the engine to come on the head portion of the train and to pull a drawbar out of car D S L 51202, which was in the head portion of the train. We indicate cars by the initials of the owning line. The only way in which it would have been possible to discover the condition of the knuckle which I have

(Testimony of William Matthie.)

described would be by taking the knuckle out of the drawbar. The only way in which it could have been determined that the knuckle was worn would be to take the knuckle out of the drawbar and examine it after it was taken out. The stretching of the train in the manner I have described could not determine that. It would not be practical in the operation of a railroad, in view of the number of freight trains which are hauled, to take the drawbar on each end of each train apart at each division or inspection point. It would be highly impracticable to take the drawbars apart and take the knuckles out of each car in a freight train, or any train, as we never would get our trains over the road at all, for in order to do that it would first be necessary to uncouple every car, and with a freight train coming into a terminal with fifty cars it would mean that the engine would have to uncouple every car, one from another, and it would then be necessary to open these knuckles and pull each of them out and look at them in order to see if they were worn. Each knuckle weighs about 60 pounds, and in a train of forty cars it would take an immense amount of time, and where you are running from forty to fifty trains a day over each division, it would be almost impossible. Car AT 86671 arrived at Barstow in extra 3201 on October 4th, 1914.

Cross-Examination.

Train No. 4 was, according to the time table, due at Danby on this particular date at 8:41 p. m., and it actually passed Danby at 9:34 p. m. We have no record of when No. 4 arrived at Siam, as we have no

(Testimony of William Matthie.)

operator there, but it passed Cadiz, the next station west of Siam, at 8:15 p. m., on time. From Cadiz to Siam is 6.4 miles, and the regular running time of No. 4 is 11 minutes, so it was due at Siam at 8:26 p. m. From Siam to Danby is 7 miles, and the regular running time is 15 minutes, which would have made it due there at 8:41, as I stated. Extra 1641 east delayed No. 4, which should have met No. 7 and No. 1. No. 7 arrived at Danby at 8:07 p. m. and left there at 9:03 p. m. No. 1 was due at Danby at 8:41 p. m., but it arrived there at 8:37 p. m., ahead of time, and left at 9:13 p. m. No. 7 left Danby ahead of No. 1, after this accident happened at 8:05 p. m. When the drawbar pulled out of D. L. S. car 51202 all of train extra 1641 was on the main line. The injury to the two cars in that train occurred at practically the same time. Car AT 86671 was nineteen cars from the engine, and D. S. L. car 51202 was next to the engine, as I remember it. Extra 1641 was going east, and there were 49 cars in the train. When this train broke in two it was necessary first for a flagman to go back and protect the rear end of his train, and it was necessary for the head brakeman to go ahead and protect the head end of the train, and then the conductor had to set hand brakes enough sufficient to hold each section of the train to keep it from running away, and then proceed to clean up the bad-order car in order to get the train into the side-track. As soon as they could get extra 1641 coupled up together in a position to move it, they moved the entire train right in on the same side-track with No. 955, and that left

(Testimony of William Matthie.)

the main line clear, but to do that consumed almost an hour, because the conductor was working practically alone. Both of his brakemen were away from him. One was protecting the rear end of the train and one was protecting the head end of the train, and he had to set the brakes on the different sections of this train which was broken in two, to avoid accidents in case of a runaway. I know who was there and what the conductor had to do by himself and what the others had to do, because it was developed in the investigation of the accident, at which the conductor, the brakeman and the engineer stated the facts. The conductor and engineer are here as witnesses. I do not know when the main line was cleared, of my own knowledge, but the record on the train sheet shows that No. 7 left there at 9:03, which would be as soon as the main line was cleared to let that train go.

No. 4 was expected to meet No. 7 at Siam and No. 1 at Danby, and No. 9 at Arimo, the next station east of Danby. No. 9 was detained at Fenner, the second station east of Arimo. No. 1 had right of way over all west-bound trains. No. 955 under ordinary circumstances would have been delayed at Danby until 9:10 in allowing all these passenger trains to go by, and our claim is that the only delay to No. 955 caused by the accident to 1641 east was the delay of one hour from 9:10 until 10:10, when 955 left Danby. The track was open and No. 955 was at Danby at 9:03, ready to pull out, but there were several other superior passenger trains which should be moved ahead of and in preference to extra 955, because they were

(Testimony of William Matthie.)

given a right of way by the railroad company over 955. The order in which the trains left Danby after the track was clear was: No. 7 departed first; then No. 1 and then first 9, second 9, and then 955. No. 4 passed Danby at 9:34. No. 4 met No. 7 that afternoon at Siam, as it remained at Siam until No. 7, after leaving Danby at 9:03, could go over to Siam. No. 4 could not take advantage of this delay and meet No. 7 at Danby, as we have no office at Siam and no operator, and I expect there was a meeting point made by the dispatcher at Siam for these two trains which could not be changed. I would not say that the delay of 955 at Danby was due to the operation of trains, instead of to the fact that the drawbar pulled out, for the dispatcher figured in making his meeting points that there would be nothing of an unusual happening that would detain all these trains, and he therefore fixed his meets on that basis. The man in charge of No. 4 knew that they were going to meet No. 7 at Siam even though No. 4 had the right of way over No. 7, as it had been fixed by train order put out to No. 4 at some telegraph office west of Siam. The track was clear at 9:03, but 955 could not have proceeded in a westerly direction at 9:03 instead of 10:10, because it could not have pulled out ahead of No. 4, which was in the siding at Siam, where it waited for No. 7. Extra 955 could not have run as No. 7, because we wouldn't run a freight train and leave the California Limited passenger train waiting for a freight train. It could have been done, but we wouldn't do it. The report made to the Interstate

(Testimony of William Matthie.)

Commerce Commission was based on information given by me, and, while any office may have done so, I never gave any information stating that this break in two was caused by the improper operation of the brakes on the part of the engineer. My statement that that information was incorrect is based upon a personal investigation and an examination of the knuckle made a day or two after the accident. I can't say that I examined the exact knuckle that was in car AT 86671, but it was the only knuckle there, but I know that the statement in the report that it was due to improper operation of the brakes on the part of the engineer is not correct, as the result of my investigation at Danby, where I found this broken knuckle in the scrap box. We don't have broken knuckles laying around promiscuously over the road, and as we had only one break in two at Danby at this time, I assume that that is the knuckle of that car, because it was the only bad-order knuckle around Danby that I know of, and because I knew of *of* nothing else that had happened there that would break a knuckle. We have a report made of every broken knuckle that is broken, and besides that I made inquiries as to where the knuckle from car AT 86671 was that was broken on this night in question, and I was informed that it was in the scrap box at Danby, and it is upon that information that I base my statement that it was the knuckle. That model shows the style of drawbar that contained the knuckle I found at Danby.

"Mr. Walter: Now, if the court please, in view of that statement we move that this witness's testimony

(Testimony of William Matthie.)

as to the condition of that knuckle be stricken out, because it is based on hearsay that it is the same knuckle that was involved in—

“The Court: His conclusions may be eliminated; but what he states that he found there—that he found the knuckle in the box—may remain for the consideration of the jury.”

There was a piece broken off of the tongue or of the shank of the knuckle, and the shoulder or heel of the knuckle was worn to a certain extent. The use to which the knuckle had been put during its operation while it was in this drawbar would cause it to become worn by reason of the fact that it comes in contact with the lock block. I think it was a combination of the two conditions, the wearing of the heel of the knuckle that caused the break in two. The break seemed to be a fresh break, but I am not expert enough to say whether the cause in the first instance was the worn condition of the heel, as my experience with couplings has been confined to casual observation in the daily routine of my duties, but it apparently was a fresh break, and I can't say that the worn heel would have any bearing on the break at the end of the tongue of the knuckle. The condition of the tail or tongue of the knuckle which I have described might have been produced by various things. A run-off of the slack in the train, or cars coming together, or the taking out of the slack in the train might break it, and those are about the only things that could break it, I presume. I don't think there was anything worn about the tail of the knuckle. The wear that I dis-

(Testimony of William Matthie.)

covered seemed to be on the heel of the knuckle, and in order to inspect that it would be necessary to take the knuckle out. It would not be practicable to discern the condition of knuckles or the condition that existed with this knuckle without taking the knuckle out of the drawbar. I do not think I said that in order for the inspectors to inspect the heel of the knuckle where I say this was worn, that it would have been necessary to have taken the knuckle out. It is possible to discern whether or not the heel of the knuckle is worn to a certain extent when the drawbars are stretched, without taking the knuckle out of the drawbar, and a gauge is provided by the M. C. B. rules and used by the various railroads throughout the country, which is made for the purpose of discovering whether or not the heels of the knuckles are worn. Defendant is a member of that organization and its inspectors are supposed to have such gauges for the purpose of measurement. It is not necessary, in order to inspect the heels of these knuckles, that the knuckles be taken out of the drawbars. If the heel of the knuckle is worn very much I do not think it is possible to pull the lock block out entirely, as it would be necessary to wear down not only the heel of the knuckle but also the lock block before it would come out or pull. By means of the gauge the wear on the heel can be determined. It is possible that the information on which was based the report wherein it was stated that the accident was due to the operation of the brakes on the part of the engineer was obtained from some of my subordinates, but I don't know where

(Testimony of William Matthie.)

they got the information, I am sure, as I did not make any report until after I made my investigation, when I made it to the superintendent, and nobody in my office that I know of made any report, and the records of such breaks in two or accidents are kept in my office and are here. The breaking of a tongue of a knuckle may contribute to the coupler getting uncoupled. The purpose of the tongue is to throw the knuckle open when uncoupling lever or pin is lifted. Numerous couplers are so constructed that when a car is standing unconnected with another car the lifting of the lock block will so loosen the knuckle as to render it unnecessary for a man to get in and open the knuckle. This R. E. Janney coupler is so made that by lifting the lock block and pulling on the tail end the ordinary action of the lever will throw it over, and if the tail end of the knuckle be broken off, as this one was, and the heel of the knuckle is not worn, but is in good condition, the mere fact that the tail end or tongue of the knuckle is broken off will not of itself add to the ease with which the cars can be cut loose and an uncoupling be effected by reason of the pull, but I think that in a train and in conjunction with the shock caused by the running out of the slack, a broken tongue would have some bearing on the opening of the knuckle, for in such a case the run of slack no doubt would break the tongue of the knuckle. I can't explain why it should break it, but it evidently did. If the shock broke the tongue of the knuckle, that aided in effecting the uncoupling, as the effect of the shock was to leave the knuckle open. I haven't any

(Testimony of William Matthie.)

doubt but what the wear of the heel assisted in the opening of the knuckle, which caused the break in two, and there is nothing else that I know of that could as to this particular knuckle have caused it. We have set rules and regulations for the inspection of knuckles by which the car inspectors inspect knuckles in connection with all other inspections when these trains are stretched at terminals, both when they arrive and when they depart, but it is not customary to make inspections of the drawbar every so often at certain points or certain times, and there is no stated rule about that. It was customary to inspect all this equipment, including drawbars and knuckles, at the time it left the terminals, but there never is any set time at which we make a minute inspection of the drawbars and take them fully apart and examine them, that I know of. It is not possible to determine that these portions of the drawbar are broken until after an accident has happened, except by personal observation made by the inspectors when the trains arrive and depart. Concealed defects in the inside workings of drawbars of a nature which cannot be discovered until the drawbar is taken apart, might be discovered by any inspector at any terminal when the car is free and apart from other cars. We have inspectors who go through the yards looking for defects—safety appliance defects—and it is their business when they reach such cars to make such inspection. They might not be able to make a minute inspection of the entire drawbar except in one or two cars in a train, but the inspector does it all the time while he is on duty. He goes

(Testimony of William Matthie.)

through the yards, making an inspection of all cars, but he can make a minute inspection of only such drawbars as he finds in cars which are free and accessible. It is possible that an inspector will find defective drawbars, and it is possible that he will not find some that are defective. In my opinion train extra 1641 east was stretched at Barstow for inspection. That is the rule, and in that event if the car inspector had noticed the worn knuckle when the train was stretched, it would have been his duty to mark the car "bad-order," if, in his opinion, it was worn sufficiently to allow the knuckle to open. This train 1641 was made up at Barstow of cars on the yard track. When I spoke about the train being inspected when it came in, I did not refer to this particular train. All trains are inspected and all cars. In such trains as are broken up and made up into other trains going out in other directions, the cars have all been inspected. I did not mean this particular train was inspected as it came into Barstow, but that the cars in it were inspected as they came in in other trains.

Statement of defendant's counsel: With the permission of counsel it might be well to state that Barstow is the point of convergence of a line running south from Barstow to Los Angeles and a line running westward to Bakersfield. It is a junction point or concentration point at which trains coming through from San Francisco through Bakersfield must pass east as well as trains coming north from Los Angeles towards the east must pass, and trains

(Testimony of William Matthie.)

coming in from each direction are oftentimes there broken up and consolidated into other trains.

(Witness continuing): There is an opportunity to inspect the individual cars after they are taken out of the train and before they are made up into the particular train in question. That inspection should have discovered this worn condition of the knuckle which should have been inspected and was inspected, I suppose. I know of the manner in which train 1641 was gotten in off of the main line only from reports of the employes who were on the train. The engineer and the conductor of 1641, the engineer and conductor of 955 are both here as witnesses.

Redirect Examination.

Danby is on a hill with a grade of 52 feet to the mile, but the track is straight and there is a passing track there with a capacity for eighty cars. A spur track is built off of the passing track with a capacity of about twenty or twenty-five cars, which is used as a set-out track. Between Barstow and Danby there are points at which, in the usual and ordinary course of business, freight trains moving eastward are inspected by the employees in charge of such trains. They are inspected at all points where the train stops and is delayed or detained any length of time. The crew of the trains are expected to make an inspection of the running gear and so forth of the cars. Newberry is located 23 miles east of Barstow and Bagdad is 78 miles east of Barstow. Had extra 955 been moved from Danby as soon as the track was cleared at 9:03 p. m., regardless of the rights of superior passen-

(Testimony of William Matthie.)

ger and mail trains, the effect upon the movement of those trains would have been a further delay to No. 4. The following passenger trains would have been delayed until they could get by the freight trains and their speed would be reduced. As an experienced railroad man I would not consider such a move a practical one. It would not have been a practical operation of the line. Under no circumstances in the practical operation of a railroad would 955 have been permitted to move out of Danby on No. 7's time. At the time extra 1641 was running into the siding at Danby it was on the ascending grade, and there would have been no occasion for the engineer of a train pulling into there to make an application of air. There was no general time at which drawbars were required to be minutely inspected, but such an inspection is accorded to the drawbars as well as to other portions of the equipment whenever a car is bad-order, and such an inspection as the eye can give is constantly accorded to that car at all times. If the official inspection to which a car is accorded, either on arriving at a station or while at the station, or after it is made up into a train and progresses out, develops to the eye of the one charged with observing its condition, anything which might indicate a safety appliance defect, then it is the custom to bad-order that car and set it out.

Recross-Examination.

We bad-order all cars with safety appliance defects if the repairs are such as cannot be made out in the yard. Such cars as can be repaired out in the yard

(Testimony of William Matthie.)

are repaired there and the train sent on. A great many safety appliance defects are repaired at the point where the defects are discovered and the car not sent to the shop for the purpose of repairs. Slight defects are repaired out in the yards. It is possible that a car may go for months when it would not be necessary to send it to a shop. I do not mean to state that we only give this minute inspection when the cars are sent to the shop, for a minute inspection is given when the opportunity presents itself to the inspector when the car is separated from other cars out in the yard. Now and then a freight train runs on a passenger train schedule, but had 955 run on the schedule of No. 7 it would have delayed No. 7, which would have been blocked behind the 955 on leaving Danby, and it would have further delayed that train by reason of the slow speed of 955 between Danby and Siam, or any other station west of there to which it may have gone. It would have been impracticable, because it would have delayed the other trains. It is impracticable railroading to deliberately run a freight train ahead of a passenger train unless there is some particular object to be attained. The regular speed of No. 7 from Danby eastward to Siam and beyond is about 40 miles an hour when it is running on schedule, as it is down grade, while the speed of a freight train is 24 miles an hour. It cannot make better time than that downgrade, as we do not permit freight trains to make faster time than that. No. 7 could only have made 24 miles an hour with that train running ahead of it. Our rules provide for that. If 955 had run as

(Testimony of William Matthie.)

second No. 7 that would have affected the movement of No. 1, which followed No. 7, and that in turn would have further delayed No. 4. No. 1 left Danby at 9:13, ten minutes after No. 7. The time card ruling requires that they shall run ten minutes apart. In addition to the fact that it would have effected a delay to the other train and would have entailed greater expense, the other objections there would have been to running 955 as second No. 7 are that it would have entailed a delay to all of the passenger trains involved in this movement.

Redirect Examination.

Under certain conditions it is practicable railroading to run a freight train as the second section of a passenger train, but it would not have been practical railroading to run 955 as a second section of No. 7. It would not have been practical railroading to sandwich No. 955 between two passenger trains moving in the same direction in this instance. From Danby to Barstow—the usual and ordinary running time of No. 7 is four hours and five minutes. We have a restriction limiting the speed of freight trains between Danby and Barstow to 24 miles an hour, so that regardless of tonnage it would be about the same. From Danby to Bagdad is 35 miles, and a freight train can make 24 miles an hour. From Bagdad to Ash Hill, which is 20 miles, the freight train can only make about 10 or 12 miles an hour, as it is up a steep grade. From Ash Hill to Ludlow, a distance of 6.7 miles, they can make 24 miles an hour again, and from Ludlow to Lavic, which is uphill for ten miles, they would make

(Testimony of William Matthie.)

about 15 miles an hour. And from Lavic to Barstow, a distance of 45 miles, they would probably make 24 miles an hour. It would not have been practicable to run extra 955 to Barstow ahead of No. 7. From six hours to seven hours would be a pretty good run for a freight train between Danby and Barstow with a clear track. Had we run 955 to any port beyond Danby ahead of No. 7, without doubt there would then have resulted a delay to extra 955 by reason of allowing No. 7 and No. 1 and two sections of 9 to thereafter go by, they being faster trains. After what happened at Danby I can see no possible way of avoiding a delay of at least an hour to extra 955 by reason of the break in two, and as a practical railroad man I know of nothing in the practical operation of a railroad that could have been done which was not done to avoid that delay. I don't know of anything that could have been done that was not done that would have tended to move the trains any better than they were on this night.

Recross-Examination.

Seven hours would be a good run for a train of the class of extra 955 between Danby and Barstow. It would not be impossible for extra 955 to assist 1641, being disabled, without orders, and it did assist in clearing the track, and then both trains headed in on the siding, as was customary. After the break in two the conductor of 1641 had to tie up his train alone, as he would not have the assistance of the brakeman of 955 from the outset. He did finally get the assistance of those other men, but he was in the rear end

(Testimony of William Matthie.)

of this 49-car freight train when this accident occurred, and it took a lot of time for him to find out what had occurred and to tie his train down by using hand brakes, and then afterwards to obtain assistance. The approximate length of the siding at Danby from head block to head block is 4000 feet, and the station is located about 2600 or 2800 feet from the west switch, and the caboose of a train of 49 cars would be about 2000 feet, possibly a little more, west of the west switch when the engine was heading in, so that at the time of this break in two the conductor in charge of 1641 was practically a mile from the station and practically 2000 feet from his engineer. The side-track at Danby will accommodate 80 cars besides the engine, and we figure that it allows two freight trains to get into the clear. There is only the one passing track and the little spur track at Danby. At the time 1641 broke in two at the west switch at Danby, under the rules it was the duty of the rear brakeman to immediately protect his train by going out a sufficient distance in the rear of it to afford full protection. That would mean he must go anywhere from half a mile to a mile, depending a good deal on the condition of the country and the grade, and whether or not the track was curved; the curvature of the track and the grade and weather conditions and everything of that nature decides whether he should go half a mile or a mile, but in any event he would go back half a mile, and it was necessary for the head brakeman to go immediately out and protect his train from No. 7, which was due at Danby very soon after this accident occurred. No. 7

(Testimony of William Matthie.)

was not scheduled to stop at Danby and extra 1641 did not have any meeting with No. 7, which was going through on the time table and had not been instructed by telegraph to stop at Danby. We have no block signal system out on that immediate territory. Extra 1641 east had one engine and 49 cars and extra 955 west had one engine and 33 cars. With the rear brakeman of No. 1641 to the west of the switch, flagging, and its head brakeman to the east of the train, in order to flag No. 7, the first duty of the conductor was to apply sufficient hand brakes to protect the different portions of his train on account of its standing on that grade, and after doing that he would proceed to the point where the trouble originated and find out what had happened. He had two brakemen, but if he had had one more car in his train he would have had another brakeman by the California Full Crew Law. The reason for setting the hand brakes when the effect of the break in two was to throw the air into the emergency, was to make the two portions of the train absolutely secure on that grade. We do not permit our trainmen to depend on the air brakes holding a train under the conditions under which this train was standing, because the air brakes on any train left standing will fail by the air leaking off. The marked capacity of the siding at Danby on our time table was 80 cars, and while that may vary one or two cars either way, generally the capacity is a little more than that shown, but in the event of the side-track not holding both trains entirely, then one portion of one of the trains would be placed over on the spur track,

(Testimony of William Matthie.)

which would permit the clearing of the main track and get both trains in the clear, and in that way 1641, with 49 cars, and 955, with 35 cars, could be taken care of. Extra 1641 east passed Cadiz at 7:22 p. m. and was making about 22 miles an hour, or 23 miles an hour between Bagdad and Cadiz. The steep hill commences right east of Cadiz, or close to Siam, and 1641 should have made 16 or 18 miles an hour from Cadiz to Siam. We have no office at Siam, but I would say that 1641 passed there at 7:40 p. m. It is a downhill run for 955 from Danby to Siam, but 955 was not made to meet 1641 at Siam instead of at Danby, because 955 would have to stop at Danby for water, which would have made it about a standoff as between the two trains, as one would have been ready at Danby and the other at Siam at the same time, and besides, the dispatcher, when 1641 was reported to him as coming at Cadiz, no doubt figured and ordered a meet at Danby, because he had had no report whatever of the 955 since 6:50 p. m., and 955 was not in sight of Danby when the dispatcher allowed 1641 to pass Cadiz at 7:22 p. m. 955 got into Danby at 7:30, and the dispatcher knew that after 1641 had passed Cadiz it would probably take extra 955 ten minutes to cut off his engine, take water, couple up again and try the air at Danby. For 955 to come from Danby down grade to Siam at 24 miles an hour, which was its speed limit, would have taken 18 or 19 minutes. After having arrived at Danby at 7:30, had extra 955 been allowed to go to Siam after taking water it probably would have arrived there about 8 o'clock, in which

(Testimony of William Matthie.)

event 1641 would only have had to wait 20 minutes at Siam for 955, but 1641 then would have been delayed for these other trains and 955 would have had to go in somewhere for No. 4, which it was expected to meet, and which was on time at Cadiz. 955 could have gone ahead, and no doubt would have gone to Siam and headed in there for No. 4, and would not have been delayed by the accident at Danby for 2 hours and 40 minutes, from 7:30 to 10:10. If 955 had met 1641 at Siam I don't think it would have been delayed at all by 1641, and 1641 would only have been delayed 20 minutes waiting for the arrival of 955. 955 would have had plenty of time to get to Siam against No. 4, which was not due at Siam till 8:26, but at 7:22, when 1641 passed Cadiz, it had been 32 minutes since the dispatcher had an O. S. on 955, and I regard the movement which was accorded these trains as a safe and conservative movement of a freight train as against a limited train, judging from my experience as a railroad man in handling trains. I consider the meeting point at Danby as being a good meeting point under the conditions which existed. A dispatcher could not have figured out that a meeting point at Siam would have avoided delay to 955. He was making the best meeting point that he could determine at the time that he made it, no doubt, and he had no idea of any accident coming up later; he knew the movements these trains 1641 and 955 were making and he made the meeting point at Danby, which I think was all right. He probably figured that both 1641 and 955 were going to meet with a serious delay

(Testimony of William Matthie.)

at Danby, because they were going in amongst all those passenger trains. There is bound to be a delay when freight trains are mixed up with passenger trains, and the dispatcher knew when 955 went into Danby that he had to allow these other trains to pass, and that it would keep 955 there till 9:10, but even if he caused 955 to meet 1641 at Siam he could not possibly figure it out that the delay at Danby would have been avoided, because 955 had to be delayed somewhere for these passenger trains; it had to be delayed meeting No. 4, and it had to meet with a delay in letting these other westbound trains pass. If this train had met No. 4 it would have met right out of Siam. I would have stayed there for No. 7, because No. 7 would have been down to Siam for No. 4. No. 7 was due there at 8:26. No. 955 could not have gone any further than Siam for No. 4. It had to get out of the way for No. 4. It would have met No. 4 at Siam at 8:26. It didn't have time to meet No. 4 beyond Siam. No. 955 could have gone from Cadiz to Siam and reached there a few minutes after 8 o'clock. But it probably could not have been in the clear at 8:10, which is five minutes before No. 4 was due at Cadiz, and No. 7 would have been into Siam at 8:26. 955 would have followed No. 7 probably at 8:31. Then instead of getting out of Danby at 10:13, as it did, it would have been out of Siam at 8:31. It would have been about two hours ahead of what it actually was as regards Siam, and probably No. 7 and No. 4, but there were still three other trains behind 955. It might have gone into Cadiz and allowed

(Testimony of William Matthie.)

the westbound trains behind it to pass it there. While the dispatcher might have known when he gave the orders for the meeting at Danby that 955 would be delayed from 7:30 till 9:10 at Danby, there was no condition in advance of the break in two of 1641 that would cause him to foresee that 955 would be delayed for a further period of one hour from 9:10 to 10:10 at Danby by reason of the accident. There is a telegraph office at Danby, but not at Siam. In railroad practice and operation there is an advantage in making a meeting point at a telegraph station over any other point, in the event of anything occurring whereby the dispatcher might desire to get hold of a train at a telegraph office, and what occurred at Danby certainly illustrates the advantage. We do not have a telephone in each caboose, and never did.

Testimony of E. E. Anderson.

E. E. Anderson, called by defendant, testified:

Direct Examination.

I was the engineer in charge of train extra 955 on October 10, 1914, when that train was delayed at Danby. We headed in at Danby for the 1641, about 7:30, got water, and stayed just in the clear at the east end of the side-track until 1641 came. I don't know much about what happened to 1641, because I never left my engine while I was in the side-track. I think some of the crew of 955 rendered assistance to the conductor in charge of 1641. We pulled the car in that the drawbar was out of, but that is the only time that I was within less than about half a mile from

(Testimony of E. E. Anderson.)

their train. I was clear at the east end of the side-track at Danby, and the only time we were off of our train was when we pulled in the car out of 1641 which had the drawbar out, but I do not recall its number. We headed in at the east switch and just stopped with our caboose in the clear, and our engine was below the station, because we cut off and got water and pulled off in the clear. In the process of pulling in the bad-order car we went on the main line at the west end, after the break in two, and took the car from the head end of 1641. Engine 1641 cut off and went up to the main line clear to the side-track at the west end and we went out on the main line to pull a car out of which a drawbar had been broken, up into the siding. That car had a drawbar out on its west end, and after we got that car on the siding 1641 backed onto his train and he then had a good drawbar at the east or head end of his train. The bad-order car had a good drawbar on the west end and the east end was chained to our engine. I think I just hauled the car in the clear in that chained condition. I did not haul that car by means of the chain instead of the drawbar any further than was necessary to put it in the clear, and engine 1641 came in and got the car and backed onto his train and pulled them all in on the siding together. I did not at any time haul that bad-order car in connection with other cars which were commercially used. I had hold of only one car at that time and kept hold of it no longer than was necessary to put it in the clear, and after I got it in the clear I cut off and went back to my train, which in the

(Testimony of E. E. Anderson.)

meantime I had left standing on the east end of the side-track. I know nothing further about this trouble with the 1641. I got the car in the clear on the side-track and then engine 1641 took care of it and put it on the spur track. That left the first car on the east end of that part of 1641 which remained on the main track with a good drawbar on the east end. A very short time was consumed in going through the switching I have spoken of. We headed into the siding at Danby and had an order to meet 1641. I think it was shortly after 8 p. m. before I learned that 1641 had broken in two and blocked the main line at the west switch. A flagman from 1641 came up by me to flag No. 7 and I asked him what was the trouble, and he said "I am not sure, I think they are broke in two." He didn't have time to fool around and find out what was the matter, as he had to flag No. 7, so he didn't know for sure what was the matter. Thereafter it was quite a little while before I cut off my engine and proceeded to the west switch. At no time was I situated where I could see what the engineer of 1641 was doing, as it was dark and I was almost half a mile from him at all times till I went down with my engine.

Cross-Examination.

I don't know just what time I went to get the car nor do I remember why they delayed getting us to come down and pull in the car. We cut off of the train and take water before we pull in the clear. We went half-way into the siding and got water and came back and hooked on to our train and put it in the clear. With an ordinary train we lack a few cars of being in the

(Testimony of E. E. Anderson.)

clear when we go to the water spout, which is not in the center of the track. We reached Danby at 7:30, but it was 7:40 before we took water. It was usual and customary for us to get water in the way we did, for when nobody is around the only proper way to do is to cut off, get your water and then pull on in, and I knew from my orders that there was nobody around and that by leaving part of the train on the main line we were not retarding anybody. We took water from the side-track.

Testimony of F. A. Wills.

F. A. Wills, called by defendant, testified:

Direct Examination.

I was the conductor in charge of extra 955 west at the time we were delayed at Danby on the 10th of October, 1914, from 9:10 p. m. to 10:10 p. m. I have my train book showing the progress we made with 955 on that day, and from that train book the cause of my delay at Danby appears. I made an 827 delay report, giving the information embraced in my train book in my own handwriting, and the delays in such report accord with the information embraced in my train book. We were delayed at Danby from 7:30 p. m. until 10:10 p. m., 2 hours and 40 minutes, to meet train No. 7, No. 1, two sections of 9, No. 4 and extra 1641 east. I know of my personal knowledge that extra 1641 east was delayed at Danby because I rendered assistance in minimizing its delay. We arrived at Danby and headed in there to meet extra 1641. After a short time 1641 east approached and

(Testimony of F. A. Wills.)

we realized that they were broken down or that something had happened. Its flagman came up, and if I remember rightly engine 1641 also came up to get water, and they asked us to come down and assist them. In the meantime they had chained the car together and we reached in and got the car and pulled it up into the siding to avoid a possible break in two again by a break of the chain. That was after the flagman came up. We arrived there at 7:30. I took our engine, engineer, fireman and head brakeman and we rendered assistance to E. J. Kelly, the conductor in charge of 1641. A. J. Brown was the engineer of 1641 at that time. When we discovered the position of 1641 it was blocking the main line, and to overcome that after they chained up, to avoid a possible break in two again, we reached in and got those cars and pulled them up in the clear on the passing track to avoid the necessity of Kelly pulling his train with the car chained up. By the car being chained up I mean that the drawbar was gone and that chaining up is a mode of moving it out when the drawbar is pulled out. As near as I can recollect the bad-order car was out on the main line 12 or 15 cars from the head end, and engine 1641 was standing out on the main line so as to let us go through on the passing track.

“Q. So that after the break in two Kelly and Brown brought the head part of 1641 up and cleared the switch and was standing on the main line, and then you with your train headed in here and put it in the clear, or did you take it into the siding?

(Testimony of F. A. Wills.)

"A. We brought it back up in our train, the B. O. and the car chained with it.

"By the Court: You brought in two cars?

"A. Yes, sir.

"Q. By Mr. Burks: You had to do that in order to get the B. O. car in?

"A. Yes, sir."

That left the first car which was standing in the main line with the good-order drawbar on the east end. We did nothing further at that time and we did not handle those cars any further by means of chains than was necessary to put the bad-order car in the clear. We did not handle the bad-order car and the other car necessary to haul it with, by means of chains or drawbars in conjunction with other cars commercially used.

Cross-Examination.

I do not know when 1641 got into Danby. I saw it but at the time of its arrival did not know and was not made aware of the accident that happened to 1641. Probably ten minutes after its arrival I was informed of the accident by the flagman, who said something happened to 1641 but that he didn't know just what. Their being broke in two caused them to be on the time of a first class train, and it was necessary for them to put a flag out to protect themselves. I was around my train all the time, but did not know what was being done in connection with 1641 in the meantime, as they were further than a quarter of a mile away from me. I did not know what they were doing until approximately 20 minutes after their ar-

(Testimony of F. A. Wills.)

rival, when they came by to see me. If they arrived at 8:05 it would have been 8:25 when they came to see me and wanted to use my engine to pull their bad-order car in the clear to avoid a further delay. I took our engine down there and found there was a drawbar out, which they had already chained up, so I hitched on to the car with my engine and pulled the bad-order car and the one attached to it into the clear. They asked me to do that to avoid a possibility of their breaking in two by handling the whole train with the car chained up. I do not know to which car in their train I attached the engine of 955 or how many cars had been taken off of the train by the engine of 1641 in order for us to have a car to which to attach our engine No. 955, but by the looks of the train I estimate that there were about 12 or 15. The car that had the drawbar pulled out of its east end had been chained to the car just in front of it, and so we attached our engine to the car in front of that car which had the pulled out drawbar and which was chained to the car to which we attached our engine, and drew the two cars in on the side-track. I don't know the designation or number of the car to which we attached our engine.

Redirect Examination.

I presume extra 1641 handled the two cars after we put them in the clear. I don't know where my head brakeman was when we turned out on the side-track. It was not necessarily his duty to be at the switch after our train was in the clear and we were clear of the main line. It is the brakeman's duty to

(Testimony of F. A. Wills.)

look over the train and look over the draft timbers and drawbars and the condition of the train, and he has a perfect right to be at any portion of the train where his duties require him to be, but when we drew in there on the siding and left part of our train on the main line, then our rear brakeman was out flagging on the main line.

Testimony of Albert J. Brown.

Albert J. Brown testified for defendant:

Direct Examination.

I was the engineer in charge of engine 1641, which was pulling train extra 1641 east, which broke in two at Danby on October 10, 1914. As we approached Danby I didn't handle the air at all, as it was not necessary, because as I approached Danby at the west switch the grade was ascending, so I shut off steam and allowed the train to slow down so that it would be slow enough by the time I got near the switch for the brakeman to go ahead and throw the switch and allow me to go in without stopping the train. When the switchman threw the switch over the train had not come to a standstill, but was moving slow; I proceeded to use a little throttle and stretched the slack out of the train and got it under headway again, and when I thought the slack had all been stretched out there was a sudden application of air, which led me to believe that the train had parted somewhere in the rear end, and the sudden jerk extracted the drawbar out of the east end of the second car from the engine, leaving one good car between that car and the engine.

(Testimony of Albert J. Brown.)

The effect of that break in two was to block the main line, as I had not quite got to the switch yet. I investigated and found what the trouble was on the head end of the train, so I instructed the head brakeman to proceed ahead and hold all opposing trains and made arrangements to chain this car up, when the conductor got there to help, which was some little time. After he had tied the train down and had come over, we succeeded in chaining the two cars together, and then the conductor went back to the second place where the train had parted in two, back of the middle or near the rear end, and coupled up the air and let the brakes off of the rear end of the head portion of the train. We intended to haul the whole train in the clear and then haul that broken car up to the spur on this siding and set it out, but instead I went with the engine up to the main line, but did not take that part of the train at all at that time. Thereafter I went back and picked up the rear end of the train. There was no part of the train ahead of the car with this broken drawbar except one car, and it was necessary to chain this other car to the crippled car, so I just left them and proceeded up the main line with the engine to get engine 955, and I think I took a little water while I was up there, and then I went back to a clearing point until 955 went out on the main track and coupled into these two cars that were chained together and pulled them in the clear on the siding so I could handle them. Then I backed up towards my train and headed in on the siding and got hold of these two cars which engine 955 had pulled in and then backed into the train and

(Testimony of Albert J. Brown.)

pulled them all in the clear with the chained-up cars ahead of my engine. Having done that, it left me with these two cars ahead of my engine and certain cars back of the engine and then I coupled into the train and pulled in the clear. I pulled the whole train in and cleared the main line and later dropped the bad-order car in on the spur. I don't know how long this entire operation consumed, but could tell by looking at the 1178 report of the accident which I made. I could not make a flying switch. An extra new knuckle was put in in the place of the broken one, but it was not a short job there because they had to carry it from the caboose, about 19 car lengths. I think that after the accident extra 955 backed out and left Danby before 1641 did. That is in my handwriting, made the same date when I got in, after I completed my run.

Mr. Burks: I now offer in evidence and read the 1178 accident report testified to by him in his handwriting on the date of the accident after he had completed his run, as follows:

"Engineman's report of accident, delays, and failures to train on trip from Barstow to Needles, dated 10/10/14. Place, Danby, engine, No. 1641, train, Ex. E, engineer, H. A. Brown, fireman, J. W. Brewer, conductor, Kelly, time card 8/05 p. m. Time delayed 50 minutes. In starting to pull in on the siding at Danby, knuckle slipped by on A. T. 86671, 19th car from engine, breaking point of knuckle, causing quick action of brakes, and pulled draft rigging out of D. S. L. 51202, second car from engine. Delay 55 min. Chaining up getting into clear. Did not stop train to

(Testimony of Albert J. Brown.)

head in and did not use air brakes and was not in a hurry. Yours truly, A. J. Brown."

(Witness continuing):

I made that report to Mr. A. G. Armstrong, master mechanic, at the end of the trip, and it is a correct statement of what occurred and was made by me to my superiors in the regular course of business, and as one of the duties of my employment.

Cross-Examination.

The first notice I had of trouble with our train when we were pulling in at Danby was when there was a sudden application of the brakes and a jerk which occurred some distance behind my engine and which was followed up by a lunge, which indicated that the train had parted near the head end. I shut down and started to investigate to see what damage had been done. I just went back to this car that had the draw bar out, and as soon as I found the draw bar out of the second car from my engine I decided to chain it to the first car from my engine with a chain which was on my engine. The chaining up required probably twenty minutes. I presume during this time the conductor was getting ready to make the coupling by putting in a new knuckle on the 19th car back. When I got to the second car from the engine chained to the first car in the train, I waited until the conductor walked back to where the other break in two was, and then we proceeded to make that coupling, after which I waited until the conductor let off all the hand brakes and the air was pumped up, when we tried to pull the entire train in the clear with that chain. We pulled

(Testimony of Albert J. Brown.)

the train about a car length, when the chain broke, whereupon the conductor set the hand brakes again and I proceeded to get ready to rechain the car or to make a new coupling with the chain. When I started in the first place, after it was chained the first time, I did not uncouple the chained up car from those behind it. If I had done that I undoubtedly could have pulled the crippled car into the siding without having broken the chain, and we could have pulled in the clear, but I don't know how much time we would have saved by doing that. It would have been necessary for that 955 to back out of the east end of the siding and they would not have known anything about it until we got up with the crippled car, and then before he could have backed down it would have been some little time, as he would have to put a flag out to protect his train. We had out a flag, but other first class trains were due there or about due. I cannot say how much time was consumed as the result of the second break in two and the trouble incident thereto, more than would have been consumed if we had uncoupled the crippled car from the third car and taken it up and set it on the siding and then returned and pulled the train into the siding. To chain up the car the second time took possibly 20 minutes. I do not know how much more time was required as the result of the way that the work was done, than would have been required if we had uncoupled the defective car from the third car in the train and taken that car and placed it on the siding and had returned and then pulled in our good train on to the side track, because I have no way of

(Testimony of Albert J. Brown.)

ascertaining the amount of time which it would have consumed to get 955 out on the main line and to place the car on the spur. We were within two or three or four car lengths and a flying switch would not have been practical, because it was upgrade, and we do not make flying switches very often on a grade of that per cent. I should judge that 20 or 30 minutes was taken up by us in chaining up the defective car in the first place and in attempting to make the move with the train with that chained up car.

Redirect Examination.

The method which we adopted was a safe method in both instances, but it would not have been a safe method to undertake to make a flying switch at night on a grade such as characterized the track approaching Danby. It would have been a hazardous thing to undertake a flying switch at that place under those conditions of night, as it might have imperiled the employees' safety. If we had undertaken to make such a flying switch and an employe had been injured I would have regarded the injury as the result of a negligent method of those engaged in making the switch. In view of the fact that the head brakeman had gone ahead and that the rear brakeman had gone to the rear, a flying switch at that place at that time of night could not have been made. We could not have made a flying switch without the brakemen being present, and if I had called the brakemen in it would have left our train unprotected and we would have imperiled the movements of other trains.

(Testimony of Albert J. Brown.)

Recross-Examination.

The conductor helped chain up the car, but he could not help me make the flying switch, as one man wasn't enough. We did make a flying switch up at the spur after we were in the clear, but we had to do so to get the car off of the side-track, and the car would drop down there of its own accord, as that spur is downgrade. When we started to chain up the car in the first instance 955 was standing on the side-track and extended over past where the spur track starts out from the side-track. We were doing all that work in the dark, and 1641 and 955 were a half mile apart. Had we gone up there to inform 955 of our trouble we would have been neglecting the work of chaining up the car and it would have taken just as long to go up and tell him after the car had been chained as it would with the engine. The reason the flagman in front of the train could not do that was that I didn't have charge of anything but the brakeman on the head end of the train and he had left our train before he knew what the trouble was, so he didn't know anything about it, so he couldn't tell. Had 955 been notified of our condition it could have moved out of the way and there would have been room for us to take the two cars and put them on the side-track.

Testimony of Charles W. Egan.

Charles W. Egan, called by defendant, testified:

Direct Examination.

My name is Charles W. Egan. I live at Barstow, California. I was a car inspector and have worked for

(Testimony of Charles W. Egan.)

defendant since 1889. I am now in the oil department, measuring oil and filling tanks. In the month of October, 1914, I was car inspector. I went to work as car inspector in September, 1910, and had been inspecting cars in the yards at Barstow for some 4 years prior to the 4th day of October, 1914. At that time I was a member of the night crew and inspected incoming as well as outgoing trains. On the night of the 10th of October, 1914, I was engaged as car inspector in the yards at Barstow, California, for defendant, and on that night, in connection with others, I inspected all trains entering those yards that I was sent to inspect. Mr. Foltz was working with me at that time. On that night I did not have occasion to report to Mr. Crooks or anyone else any cars that were found to be in bad order. If any cars were in bad order I made a report in the usual and ordinary course of my employment.

Testimony of John L. Crooks.

John L. Crooks, called by defendant, testified:

Direct Examination.

My name is John L. Crooks. I live at Barstow, California. I have been chief night inspector of cars for defendant at Barstow for 3 years, and that is my present business. I had no prior railroad experience, but during the past 3 years I have worked continuously for defendant as chief car inspector, and before that I worked practically a year and a half on the repair track and on repair work. Mr. Egan, the witness who just left the stand, worked under me in the

(Testimony of John L. Crooks.)

month of October, 1914. In my capacity as chief car inspector others who do the actual inspecting of the cars make reports to me of any defective cars that are found in the train, or any repair that is made of any of the cars in that train. Written cards are turned in to me and I make a duplicate of those cards for certain of these repairs and bad-order cars in the book that is kept for that purpose. I have here the report made as of date October 10, 1914, which is now in possession of the court. One of these books contains a report which shows that the train Mr. Egan was questioned about arrived at 11:05 p. m., October 8, engine 1625, conductor Duncan, from San Bernardino. I have no record as of October 10, 1914, respecting extra 1641 east, conductor Kelly, as that train didn't depart on my shift.

(Mr. Brennan: If Your Honor please, I desire to ask this witness as car inspector some questions with regard to counts 12 to 16, inclusive, which involve extra 1656 east of October 12, 1914, as we have all these inspectors here and desire to have their testimony taken so they may be relieved and excused and pursue their usual occupation.)

(Witness, continuing): I was chief inspector at night on October 21, 1914, and I have a record of extra 1656 east of October 21. I don't remember at what particular place, but that train was made up in the Barstow yards. Inspectors were on duty that night and performed their duties with respect to the inspection of cars and trains entering Barstow and departing therefrom. There was no record made as to

(Testimony of John L. Crooks.)

any defective cars having been reported to me on that day at Barstow on this particular train, for there were no cars in that particular train that were reported to me as being defective or in bad condition and no exceptions taken on any cars. Respecting the method of inspection that was in vogue in Barstow on October 21, 1914, I will say that it is customary when a train is reported in, for two of the inspectors to go up to the end of the yard the train is arriving from. When this train pulls in and stops they start at the caboose and look the train over and give it a very thorough inspection as they come down over the train and take a record of any defect noted or any repair that needs to be made and they put a repair card on the car and go on down and finish looking over the train and then come back and make any repair that they have to make that is necessary on the train. That is on the incoming train. On the outgoing train as a rule they are made up in time so that we can put a ground air plant that we have in the yard in these trains and charge them up from this plant and apply the brakes the same as an engineer would, and go over the train and look at the piston travel on the train and then release the brake. One man will start from the head end and the other from the center of the train. When the man at the head end gets to the center of the train to the ground air plant he releases the brakes for the man on the rear end, then comes down over the train to the ground air plant, looking for safety appliances and such defects as exist as he goes over the train, and he stays at the ground air plant until the engine

(Testimony of John L. Crooks.)

comes out. When the engine comes out he cuts the air out and goes back to the caboose, sets the brakes and releases them, and then the air is released and he high-balls the train. By the ground air plant I mean that we have a compressed air plant that we use to hitch up the train when they are made up early enough so we can work them out with this ground air plant. That saves delay, so that when the engine gets on the train it is already hitched up and it is a matter of just a few minutes to get it off your hands. I mean by a "high-ball" the signal given when the inspectors are through with the train; the signal that the blue flag and blue lanterns are taken down. By this process that I have detailed an inspector will give a car or train just one very thorough inspection when it enters into the yard and then he looks over the train 3 or 4 times more in working the air and making his repairs and getting the train out of the yard. The couplers and drawbars and equipment of that kind are inspected on the incoming train. When they slacken trains the couplers of the trains are always stretched. Hand brakes are set on the end of the train and the train is stretched to get all the slack out of the couplers, and those couplers are looked at by a man's eye and a man used to the work and trained in it can easily tell by looking at a coupler whether it ought to be gauged or not, and if anything looks unsafe to him he gauges the coupler. He also looks underneath the car at the yoke rivets, the follower plates and draft-springs and the lug and drafting bolts and anything of that nature that has to do with the pulling of the train. The

(Testimony of John L. Crooks.)

lower head of the yoke rivets are visible to the inspector in passing along the train, as they are in plain sight, just the head of the rivet on the bottom of the yoke, and can be seen very readily as the inspector passes along. The gauge is sometimes used in connection with the inspection of the car. The gauge which I have shown to the jury is the type of gauge to which I refer, and it is furnished by the railway companies under rules promulgated by Master Car Builders' Association, which is an association governing the handling of freight carriers and freight cars. This gauge is used by the inspector in connection with his duties. In gauging a coupler this gauge is used between the point of the knuckle and the guard arm of the coupler, and if the distance is over $5\frac{1}{8}$ inches the worn part has to be changed and brought within that limit. So that in addition to the experience which the inspector has gained in connection with the performance of his duties he is also guided by this gauge, and he may apply this gauge whenever in his judgment the space between the couplers is too great. Upon the days to which you have called my attention, and the nights of those days, the system of inspection which I have described was pursued by the defendant company and its employees. I have no record showing that any defective cars were in this train. No exceptions were noted. If any such cars had been found defective they would show up in my report, as they would have been reported to me by the inspectors and put in this book. That report is made by me in the

(Testimony of John L. Crooks.)

usual and ordinary course of business and in my hand-writing.

Cross-Examination.

That report is made and kept in this book and sent to the car foreman's office and put on record or filed there. It is made and kept by me until the book is closed. When it is full of trains it is sent to the car foreman's office and kept on record there. The way in which I make that report and get the information from which it is made is as follows: We have a line up that tells me what trains are coming in, who the conductors are and the engine number. I put that in my book and watch the time they come in. If I don't happen to see it I get it from the inspectors or off the register. And the outgoing trains are marked with the conductor's name and engine number and the track the trains are made up on. That book shows the engine numbers of the trains leaving the Barstow yard on my shift, but it does not show the consist of the cars or the cars in the train at this time. It shows any defective cars in a train and certain repairs made to those cars, and the book is known as the repair book. All this information is obtained from my inspectors and there is nothing on that book to show that there were any cars discovered to be defective at the time of inspection. When I stated that if there were any cars defective it would show in that book I meant that if my inspectors discovered any defect and made a note of them they would appear in that book, but I don't know of my own knowledge that they made an accurate and careful inspection of these trains, except

(Testimony of John L. Crooks.)

from what I know they are supposed to do, as I did not inspect any of the cars personally. Train No. 1641 departed on a day shift so I couldn't state how many cars it contained. On a train of anywhere from 40 to 48 cars two men are usually supposed to give from about 30 to 40 minutes to inspection, depending a great deal on the construction of the car, what kind of cars they are and whether there are any foreign cars in the train or not. Sometimes they give 50 minutes, and I have seen them put in an hour on such a train as that. In order to give a very close inspection it would ordinarily take that much time. In making an inspection of the yoke rivets and the condition of the couplers underneath inspectors are not supposed to get clear down under the car and make an inspection from beneath the car. A man stoops down so he can see up underneath and see those defects and if a yoke bolt is broken or missing it should be discovered by the inspector, although if one of the yoke rivets was broken and the other was good holding the lips of that coupler up tight against the knuckle or against the shank of the coupler a car inspector could not detect the defect in the yoke rivet because he could not see through that iron and see if it was broken, but if it was missing he could tell it.

Redirect Examination.

An inspector passing along and getting down and looking at the yoke rivet can see whether it is missing entirely or not, but if the bottom of the rivet is shown to be in place there is no way that he can see the condition of the rivet from the bottom to the top because

(Testimony of John L. Crooks.)

that is concealed. These rivets are placed in the yoke hot and the rivet heads are riveted with a sledge-hammer. When I say that if one of these yoke rivets were missing it might be discovered, I mean that I would discover it by looking at the bottom and seeing that the rivet was out, as I could see the hole where the rivet belonged and tell that the rivet would be missing.

Testimony of Joseph Mayolett.

Joseph Mayolett, called by defendant, testified:

Direct Examination.

My name is Joseph Mayolett. I live at Barstow and have lived there for 3 years. I am working for defendant as car inspector. Up until now I have worked at night. In October, 1914, I was working for the defendant company at night as car inspector. I have had other railroad experience on the New York Central and Pennsylvania lines. 6 or 7 years on the New York Central and on the Pennsylvania about 10 or 11 years. My duties for those railroads were to inspect cars. I have been inspecting cars for railroad companies, including defendant, for 18 or 20 years, and am familiar with the system of inspecting cars that has prevailed upon defendant's lines and at the yards at Barstow and was familiar with the customs and rules and methods in the month of October, 1914. I know of no better system of any other railroad where I have worked or with which I am familiar that is better calculated to discover defects in cars and equipment than that which prevails upon defendant's lines, it is all the same. When a train comes into the yard

(Testimony of Joseph Mayolett.)

and stops, the engine is cut off and there is a blue signal attached to each end, the head end and the hind end, and as a rule there are two of us go to the hind end of the train, and when it comes in and after the train is stretched a signal is put on while we are inspecting it. You go along and look for those defects, such as draw-bars, beams, hot boxes and safety appliances especially, one on each side, and it doesn't take long for an experienced man that is a professional to locate them—it doesn't take us long to discover those defects if there are any. If we find a minor defect which can be repaired we do so after the train is looked over, but if the defect is of such a character that we cannot readily repair it the car is sent to the shop and a card is put on each side of the car stating bad order. That card is called a bad order card. After we are done inspecting we notify the head inspector of the condition of the train. Mr. Crooks was the head inspector under whom I was working. I inspected extra 1641 east on the 10th day of October, 1914, I was on duty on that night, and if any defective cars were found on that train or any other train inspected by me which could not be repaired by the inspector I made a report to Mr. Crooks. My inspection was of such a character as to car number 86671 which was in train extra 1641 east as would have disclosed any defect with respect to the draw-bar or yoke rivets or any of the other safety appliances of that car and if there had been any such defects I would have reported them. My inspection at that time with reference to car 86671 and the other cars in that train was of such character as

(Testimony of Joseph Mayolett.)

would have enabled me to discover any defects but there was no defect there. I was also one of the inspectors on October 21, 1914. On that night train extra 1656 east was made up in Barstow with the switch engine from cars that came in on other trains. Those cars that came in on other trains received, before they were put into this train that was made up, the same inspection as any other cars and that I have described. After these cars were put into train extra 1646 east an inspection was then made of the whole train before its departure. The train was made up by the switch engine. We coupled up the hose and went over it and inspected it. And while we do that we go along and inspect—we look under the cars with respect to the draw-bars the same as we do when they come in and we test the air and go over the train, and after the air is tested the ground air is removed and the engine gets on, and after the engine is on we go along and see that the brakes are set again from the engine and as we go along we inspect it again. And after we get done we give them the signal that the train is O. K. and that ends our part of it. My inspection on that night of October 21, 1914, at Barstow was of such a character as would have enabled me to have discovered any defects upon any of these cars that were put into this train 1656 east. My inspection of that train after it had been made up and before the time of its departure from Barstow was of such a character as would enable me to discover any defects. If any cars had been found defective and not subject to repair there by me or by the other inspectors we

(Testimony of Joseph Mayolett.)

make reports to our superior. We would had order the car right then and report to the head inspector.

Cross-Examination.

My hours of inspection were from 6 in the evening till 6 in the morning with an hour off for dinner.

(Statement by counsel for defendant): This witness has been testifying respecting cars in extra 1656 and also extra 1641. Extra 1641 east left Barstow October 10 at 1 p. m. That train was inspected by Wheeler and Thursby. The witness on the stand inspected cars which had arrived in extra 3201 at 10:55 p. m. on October 4, including car A. T. 86671, which thereafter caused the break in two to extra 1641. When car 86671 arrived at Barstow it was inspected by this witness 6 days before this train extra 1641 was made up.

(Witness continuing): I inspected train extra 1656 east on October 21, 1914. I remember that I inspected the train because the book which Night Chief Inspector Crooks has shows it. All I know about it is Mr. Crooks' own record. I do not remember of my own knowledge outside of Mr. Crooks' book that I inspected 1656 east on October 21. All I know is that I inspected the train because I signed my name to the book record showing that I did. That book is in the car foreman's office and I have not the book with my signature that shows that I inspected this car in 1656 east.

(Statement by defendant's counsel): Mr. Burks: The record of inspection kept at Barstow on the dates in question is not of exactly the same

(Testimony of Joseph Mayolett.)

character that was kept at Bakersfield at the time involved in counts 1 to 6. At Barstow the record discloses only those cars which were inspected and found to be defective in any way, whereas the record at Bakersfield showed all cars which were inspected and this testimony is offered for the purpose of showing by a process of elimination that certain cars were inspected upon their arrival at Barstow in other trains and that they were thereafter inspected again before their departure in the trains involved in the several causes of action.

(Witness continuing): I don't know of my own knowledge that I inspected the cars in extra 1656 east, but I inspected all trains coming from the west at night. Extra 1641 was made up in Barstow. I know that I inspected the cars in 1656 if it was made up in Barstow because they have to be inspected before they leave and I inspected all trains going out during my shift. Four inspectors were in the yard that night. 2 in the east end of the yard and 2 in the west end of the yard and 2 were in the passenger service. 4 of us make the inspection of freight trains. Mr. Nash, a partner working with me, is not working for the company now. We worked in the west end of the yard and all cars coming from the west passed through our yard. It is possible that some of the cars that left in 1656 had arrived in trains that came in during the daytime, but I inspected all cars that came into the west yard from the west on my time at night. I don't know when all the cars that went out

(Testimony of Joseph Mayolett.)

in 1656 came into the yard as I only inspect them at the time of their arrival in the west end of the yard.

Redirect Examination.

I inspected the cars that came in in the trains that arrived. The inspectors that inspected the outgoing trains are not working for the company now. If any cars came into the yards at Barstow after 6 o'clock p. m. when I went on duty and before 6 o'clock in the morning, they passed under my inspection and my reports are made to Mr. Crooks. Mr. Surles had charge of the inspection of cars during the day time. There is a record in the yard with respect to those 2 particular cars, showing when they came in and what train they came in on and how long they remained there. If I made an inspection of the particular cars I have mentioned (A. T. 86671 which left in extra 1641 east on October 10, and C. M. & St. P. 25406 and A. T. 72821 which left in extra 1656 east on October 21) and there is no report of any defects in these cars it means that I did not find anything wrong with the trains they were in. There could not have been anything wrong without my having discovered it and I could not have overlooked any defect.

Testimony of William Matthie.

William Matthie, recalled for defendant, testified:

Direct Examination.

I have the record showing in what train car A. T. 86671 came in on and the date of its arrival at Barstow in the switch list made out by the conductor of

(Testimony of William Matthie.)

the train handling the car into the Barstow yards. It is a record and report made in the usual and ordinary course of business under the rules of the company. Car A. T. 86671 arrived in Barstow in extra 3201 October 4 at 10:55 p. m., loaded with company scrap. Car D. S. L. 51202 arrived at Barstow empty in extra 1605 at 11:05 p. m. on October 8, 1914. Car C. M. & St. P. 25406 arrived at Barstow loaded in extra 945 at 6:55 p. m. on October 21. Car A. T. 72821 arrived at Barstow empty in extra 945 at 6:55 p. m. on October 21, 1914, in the same train with C. M. & St. P. 25406.

The Court: The jury will understand that the first two cars that have been testified to (A. T. 86671 and D. S. L. 51202) were in train 1641 east which left Barstow on October 10 and to which counts 7 to 11 relate, and that the last two (C. M. & St. P. 25406 and A. T. 72821) were in train 1656 east which left Barstow October 20 and to which counts 12 to 16 relate.

Testimony of J. L. Crooks.

J. L. Crooks, recalled by defendant, testified:

Direct Examination.

Car A. T. 86671 arrived at Barstow in extra 3201 at 10:50 p. m. on October 4. The cars arriving in that train were inspected by Inspectors Mayolett and Nash. Car D. S. L. 51202 which arrived on extra 1625 on October 8 at 11:55 p. m. was inspected by Inspectors Eagan and Folts. Cars C. M. & St. P. 25406 which arrived at Barstow in train extra 945 east on October 21 at 6:55 p. m. was inspected

(Testimony of John L. Crooks.)

by Inspectors Mayolett and Nash, Folts and Veale. Car A. T. 72821 which arrived at Barstow in extra 945 east on October 21, 6:55 p. m., was also inspected by Inspectors Mayolett, Nash, Folts and Veale. These last two cars came in on the same train. Inspectors Folts, Nash and Veale are no longer in the service of defendant company. There were 4 inspectors in the freight yard at the times those cars left and whichever two were not busy on incoming trains were put on outgoing trains, and all four of them inspected outgoing trains if they were not busy. Train 1656 east, leaving Barstow on October 21, 1914, was inspected by Mr. Mayolett, who has testified, and by Mr. Nash.

Cross-Examination.

When I say that Mayolett and Nash inspected A. T. 86671 on October 4 I know that because our records show that car A. T. 86671 came in on extra 3201, which arrived on my shift, and I know the inspection was made because I was there and put the names of the inspectors down when they inspected the train and saw them make the inspection while I was in the freight yard. I might not have seen them begin work on the train, but I saw them at some time during the time they were working. I know that they made a thorough inspection on October 4 aside from what I know they are supposed to. If I remember right car D. S. L. 51202 came in at 11:05 p. m. on October 8, and the same is true in regard to my knowledge of the inspection of the cars in that train as it is in regard to extra 3201 that it was the in-

(Testimony of John L. Crooks.)

spector's duty to inspect the train and that he found nothing wrong with it on October 8. C. M. & St. P. car 25406, involved in counts 12 to 16, was inspected by 4 men, there were 4 inspectors on duty at that time and there were 4 inspectors inspected that train. Car C. M. & St. P. 25046 and A. T. 72821, which arrived in extra 945 east on October 4 and which are involved in counts 12 to 16, were both inspected by 4 inspectors. I know that they inspected that train and my book shows that all 4 were on that train. Mayolett and Nash worked together in the west end of the yard and the others on the east end. Inspectors Mayolett and Nash were working together at the time of the arrival of this train extra 945 east in which car C. M. & St. P. 25406 and A. T. 72821 arrived on October 21, and they inspected the rear or west end of that train. The train in which C. M. & St. P. 25406 was hauled when it left Barstow was extra 1656 east, which is shown by the records made in my book at the time to have been inspected at the time of its departure by Inspectors Mayolett and Nash. I make the record of the trains that these men are supposed to inspect at the time the inspection is made, and in case they find defective cars, they report the defective cars to me, I put them down in this book after their inspection. If they do not report any defective car the book shows clear—that there are no defects. I have nothing in this book that there was any car in those trains reported defective. I know nothing further about cars A. T. 86671 and D. S. L. 51202, or as to their condition at

(Testimony of John L. Crooks.)

Barstow than what I have testified to, and that is this record shows nothing defective on those cars.

Redirect Examination.

By referring first to the switch list and then to the train book I can ascertain by whom these cars were inspected. By referring first to switch list and then the train book I can tell that car A. T. 86671 was ten cars from the head end in train extra 3201, when it arrived at Barstow on October 4, 1914, at 10:50 p. m., and on this particular train Inspectors Mayolett and Nash inspected the entire incoming train. D. S. L. car 51202, which arrived in extra 1625 on October 8, was the second car from the engine at the head end of the train, and it was inspected by Inspectors Egan and Folts. The two inspectors worked together and both started at the rear end of the train. The entire train which contained car A. T. 86671, which was subsequently taken from the yard by extra 1641, was inspected by Mayolett and Nash when it came in, and the entire train which contained car D. S. L. 51202, which was another car taken from the yard by train extra 1641, was inspected by Egan and Folts when it came in. When extra 945 arrived at Barstow on October 21, car C. M. & St. P. 25406 was 7 cars ahead of the caboose at the rear end of the train, and car A. T. 72821 was 4 cars from the head end of the train. There were 4 inspectors on that train, Mayolett and Nash worked at the rear and the other 2 men at the head end, and there were 47 cars in the train. Where there are 4 inspectors on a train they usually meet just about the center of the train. 52 cars

(Testimony of John L. Crooks.)

were on extra 3201 on October 4 and 44 cars were in 1625 on October 8.

Recross-Examination.

Car A. T. 72821 was not inspected by Mayolett as it was on the head end of the train.

Testimony of R. L. Surles.

R. L. Surles, called by defendant, testified:

Direct Examination.

I am now and for 5 years past have been car inspector for defendant at Barstow. I have worked for the Southern the Seaboard Air Line, and the Southwestern, and St. Louis and Southwestern, and have been engaged in inspecting cars for the defendant and other railroad companies for 17 or 18 years. I was day inspector of cars at Barstow in the month of October, 1914, and Inspectors Wheeler and Thursby and Hanson and Jack Kelleher worked under me during that month. In the month of October, Inspectors Wheeler and Thursby inspected both in and out going freight trains, and they inspected the entire train extra 1641 leaving Barstow in charge of Conductor Kelly on October 10 at 1 p. m. on the 14th, 1914, which contained car A. T. 86671 that came into the yards on the 4th or 6 days before, and D. S. L. car 51202 that came in on the 8th, on its departure from Barstow.

Testimony of J. C. Wheeler.

J. C. Wheeler, a witness for defendant, testified:

Direct Examination.

My name is John C. Wheeler. I am one of the car inspectors at Barstow, California, for the defendant company and was on the 10th day of October, 1914. I was working in the day time and inspected both incoming and outgoing trains. I inspected outgoing train extra 1641 leaving Barstow at 1 p. m. on October 10, 1914, in company with Inspector Thursby. According to the books I think I inspected the head end and Thursby the rear end of the train at or about the time of its departure. If there had been any defective cars disclosed by that inspection we would have reported to the head inspector, and if it was in bad order we would have bad-ordered the cars. Mr. Surles was head inspector at that time. Our inspection at that time was of such a character as would enable us to discover any defect that may have existed in the cars in that train. We have to couple up the hose and that brings us down on the car where we can see the couplers and defects. In coupling up this hose we have to get between the cars and get down and couple these hose together on all the cars on the train, and then we put the yard air in and set up the air, and then we have to go down one side and back on the other. That gives us about 3 times over the train and we are looking for all defects while we are working on that, and while inspecting down between the cars for the purpose of coupling the hose,

(Testimony of J. C. Wheeler.)

we are able to see all there is under there—the knuckles and spring and in case a rivet should be broken in the center that would not be revealed by an inspection as that part of the rivet, broken in that place, would not be seen by the inspector. If the yoke is up tight in the butt it is hard work to detect a rivet broken inside of the yoke. If it is broken in the middle inside of the yoke you could not detect it as only the bottom part of the rivet is visible when you inspect it.

Cross-Examination.

I am not sure whether I inspected car A. T. 86671 on my partner, but I know one of us did, only by the records as that is all we can go by. I think D. S. L. car 51202 was in the train, but I am not sure. If there had been a worn heel to the knuckle we would have hardly discovered that. There is no method by which we could have discovered that in the ordinary inspection of the train except by a gage. We go by our eye. We look at a coupler and we can tell from looking at it whether it is out of gage or not without the use of a gage. The purpose of a gage is to see how much it is out of guage. We can tell whether a coupler is out of gage by our eye, when walking along, whether it is enough to condemn it or not. If the heel of the knuckle in that train was worn so that it was out of gage it could have been discovered.

Redirect Examination.

I was supplied with a gage on that date, and always, Mr. Thursby and I inspected this train, extra 1641 east, before its departure. The manner in which a train is inspected by two inspectors before it departs

(Testimony of J. C. Wheeler.)

depends on where we are. If we are both together we both go up, one on each side, but if we are separate we work to the best advantage. If we are in the middle of the train we each go down one side and up the other. If we are together we both go down on the same side of the train, but if we are not we go around the train separate, two on both sides of it, and each man makes the entire train himself in that way. Where we both work together one takes one side of the train and the other the other side, but if we are not working in that manner we both undertake to inspect the entire train and we call it doubling, but when we highball them then we have to be one on each end of the train when we let them go out. I can't tell just exactly how we worked this one particular train, but am just stating the different ways we work. Sometimes we both go up over the train, one on each side, from wherever it happens we are. If we are in the middle of the train we sometimes go each way, to save walking up and back; we double the train; but the air is generally in the center of the train, and after the engine cuts on we are done with the train. When we are together I go up one side of the train and come back to where I started from, and he goes up and come back to where he started. The air is in the center. If we both went one way the two of us would double. After we get the air tested the engine backs on and we take the ground air out of the train and cut in the engine and give the highball and at that time one of us has to be on the engine and the other on the caboose. That is what I meant by the

(Testimony of J. C. Wheeler.)

highball signal which is given at the completion of our inspection and that is what I meant by one of us being on each end of the train. When inspecting incoming trains we start in and work down on one side in partners or pairs. We sometimes go back to the head end and come up over them in pairs, but it is not always convenient for us both to be in the same place. Our manner of working depends entirely on whether there are two for an inspection. I inspected half of that train, going down on one side and back on the other. I remember what kind of a car D. S. L. 51202 is.

Testimony of H. A. Thursby.

H. A. Thursby, called by defendant, testified:

Direct Examination.

I was working for the defendant company in connection with Mr. Wheeler. When inspecting the incoming trains the men are given what is called the line up, which shows the name of the train, unless it is an extra, the conductor's name, and the engine number. We proceed to the end of the yard in which the train arrives, and after it stops and a stretch of the train is made we proceed to the head end of the train, making the customary inspection of safety appliances, couplers, draft gears, brake rigging, trucks and wheels, and other appliances, afterwards going back over the train and making whatever repairs are necessary. In making a repair we generally card a car for repair, if a light repair, or if it is in bad order it has to go to the repair track and we put a tag on it, and also

(Testimony of H. A. Thursby.)

make a duplicate stating the repair and turning that into the hands of the head inspector. On outgoing trains we generally work a little different; that is to say, we work in whichever way is to the best advantage of ourselves, where there is two men on the train, and it is customary to work the trains out with what is called the ground air in the yard, and where there is two men, as a rule, we start in the middle of the train; one man goes one way and the other the other, not necessarily on opposite sides of the train, and we double around the train and back, each man making an inspection of one-half the train on both sides. We then put in the ground air and charge the train. When the highball is given it is necessary for one inspector to be at one end of the train and one at the other while testing the air brakes when they are actually set from the engine to show there are no cuts or leaks in the air line of the train. An angle might be turned thereby shutting off the flow of air, in which case we couldn't make a sufficient test unless one man was at each end. When a train enters the yards this incoming inspection occurs and then the train is broken up and another train made up, and before that departs we give it this outgoing inspection. I have been engaged in inspecting cars about $2\frac{1}{2}$ years for the defendant company. Previous to that I had been $5\frac{1}{2}$ years in the transportation department, and in connection with my duties in the transportation department I had occasion to be about cars and know about their inspection and the manner in which they were inspected. According to the head inspector's records I was one of the in-

(Testimony of H. A. Thursby.)

spectors who inspected D. S. L. car 51202 in train extra 1641 leaving Barstow at 1 p. m. on October 10, but I couldn't say for sure. I was one of the inspectors on that train and inspected it in the manner that I have stated. The inspection that I made of that train and of the cars in the train was of such a character as would enable me, as an experienced car inspector, to discover any defects in any of the cars in that train. When we started out, the 2 men, from the center of the train, we looked over all the safety appliances, including grab irons, sill steps, couplers, draft gear, brake rigging and trucks; and in inspecting the couplers we went underneath each end of the car and looked at the yoke rivets and draft springs and the draft timbers, in wooden frame cars, so that in case of a broken rivet, where it would show, we would detect it; we examined the couplers. When the train has been stretched it will show to a man's eye whether it is out of gage or not, and in such cases we gage it, and if it is out of gage, have the knuckle or lock removed, as the case may be. I was supplied with a gage at the time I made an inspection of this train in connection with Mr. Wheeler. Where a car or an appliance is out of gage we have to determine the cause generally by removing the knuckle and lock and replacing it with new material. That cannot be done when the train is made up, and it is necessary to have the train crew make the cut so that we can work on it if we find it defective. Only the bottom part of the yoke rivet is visible to the eye upon inspection, and if a break occurs anywhere inside of the yoke it

(Testimony of H. A. Thursby.)

probably could not be observed by visual inspection unless it had dropped down sufficiently to show that there was slack there.

Cross-Examination.

One of these rivets has a round head and there is not generally a square shoulder next to that head. If a rivet is broken it will not ordinarily drop down because it is heated when put in and driven up tight and if there is a crevice or seam inside the shank it would naturally fill right in there and the rivet spreading would prevent it from dropping down. After the rivet cools it becomes smaller to some extent, and when a rivet is broken it ordinarily drops out. If a coupler is defective by reason of the fact that the heel of it is worn, that should be discovered by the inspector in making his investigation. If the draw-bar on D. S. L. 51202 car was pulled off by reason of the fact that the knuckle slipped by on car A. T. 86671 and threw the air into emergency, then even if the draw-bar on D. S. L. 51202 had been in such condition that, ordinarily, it would stand a strain, it is possible that the force applied by reason of the sudden breaking in two of the train would pull the draw-bar out notwithstanding that good condition.

Testimony of E. J. Kelly.

E. J. Kelly, called by defendant, testified:

Direct Examination.

My name is E. J. Kelly. I am a conductor in the employ of the defendant company, and was in charge of train extra east 1641 at the time that train broke in

(Testimony of E. J. Kelly.)

two at Danby. As we were approaching the west switch at Danby the engineer slowed up for the switch, and the knuckle broke in car A. T. 86671, the 19th car ahead of the caboose, throwing the air into emergency and pulling the draw bar out of car D. S. L. 51202. The knuckle pulled by and a portion of the knuckle was broken. I examined both draw-bars at the point where the broken knuckle occurred and found that there was nothing that could have been seen from the outside. We had examined that train thoroughly every time we stopped. The coupler which broke was an R. E. Janney coupler which as applied to a freight car will weigh about 200 pounds. That is a correct model of an R. E. Janney coupler and this part called the knuckle weight about 15 or 20 pounds. I discovered that there was a portion of this heel of the knuckle broken off. I should judge about 2 inches, and there was another piece chipped off the shoulder. I examined the point of both of those breaks and made such an examination as to enable me to determine whether or not they were new or old breaks, and I found that they were both new breaks. The points at which the breaks occurred were not such as could have been discovered without taking the coupler apart. I made a particular examination of this for the purpose of making a report on it, and I made such a report in the usual and ordinary course of business to my superior, which is called the 810 telegraph report, and another called the 813 report. I made an examination of the car immediately after the accident on that same night before I left Danby. I had to examine it before

(Testimony of E. J. Kelly.)

I could put another knuckle into it. I took this broken knuckle out and put another one in. I made that 810 telegraphic report in duplicate and that a copy of the wire report which is transmitted by wire to the trainmaster's office, the original of which was filed at Goffs. The 813 is a written report that I made to the superintendent at the end of the trip. This 813 report is the original report made to the trainmaster's office regarding any accident that may happen on the line, made as soon after the accident as we can find time to make it, and this is the original. I have stated just what I discovered in my examination of the R. E. Janney coupler on car A. T. 86671 and that examination was as careful as I could make it. The effect of the break in the knuckle on the R. E. Janney coupler on car A. T. 86671 was to throw the air into emergency and that pulled the draw-bar out on D. S. L. 51202, which was the second car from the engine. There was a piece chipped off the shoulder of the knuckle which was on A. T. 86671, but it would not be apparent from the outside to a car inspector and the coupler would still remain coupled unless you had some severe thing to overcome it, and a piece might be broken off, as I found it on that coupler, and still the train stay together from Barstow out to Danby, but I do not think that piece was broken at Barstow; I think it was broken afterwards. Train No. 1641 was made up at Barstow and we had traveled about 115 miles before the break in two occurred, and during that 115 miles I watched that train go by me at Newberry, Bagdad, Ludlow and Daggett. By "letting the train go by me"

(Testimony of E. J. Kelly.)

I mean that our instructions are that all engineers will move a train slowly so that we can see it in passing in order that some member of the train crew may observe the trucks and see whether anything is dragging or anything is wrong, for bolts might come down and permit a draw-bar to hang a little low. It is usual and customary for the conductor and brakeman to make an inspection of the train by allowing it to go by them between division terminals at every stop under special rules in the time card which read:

“Rule 6. No freight train must run more than thirty miles without stop being made for inspection of train.”

“Rule 15. When for any cause a freight train is stopped the engineman in starting it must move it at a speed that will permit the trainmen to observe every wheel and know that brakes are not sticking.”

Between the time we left Barstow and the time we arrived at the east switch at Danby we made the inspection required by those rules at every stop, and the engineer complied with the rules in permitting the trainmen to examine the train at a rate of speed so they could get on. If any brakeman of my crew had discovered anything wrong with any of the brake rigging, wheels, couplers, or other equipment in that train they would have told me about it, and those things are all included in the general inspection of the train while in transit at all stops. It was customary and usual to examine the couplings as these trains move by as well as the brake rigging and wheels and to watch everything in general as far as we could, and if anything

(Testimony of E. J. Kelly.)

out of the ordinary is discovered I go to work and repair it if it is of such a nature that I can. From the time we left Barstow until the time we approached the west switch at Danby on October 10 no brakeman of my crew reported to me anything wrong with any part of the equipment in that train, and during that trip I did not discover anything wrong in any part of the equipment. At the time we left Barstow there was no condition which I was acquainted with or which I could see which would cause me to foresee that my train would break in two. At the time I started on that trip there was nothing which would cause me to foresee that we were liable to be delayed before reaching Needles and there were no defects in the train or in the coupling at the time we departed from Barstow that could be seen. At the time I left Barstow I had extra knuckles in the caboose in my train, for it is customary for conductors to carry extra knuckles and all cabooses are equipped with them, so that in case we break one out on the road we can replace it. Following my discovery as to the condition of the knuckle on A. T. 86671 the first thing for me to do was to get a flag out to protect the train because we were going against No. 7 and No. 1 and two 9's and No. 4 was following and I had a meet with 955 at Danby. We were going against four regular passenger trains and had a positive meet order for 955 at Danby. After the break in two I got the flagmen out to protect the front and rear ends of the train while I tied the train down—by which I mean that I set a sufficient amount of hand brakes so that the train would not roll on the grade.

(Testimony of E. J. Kelly.)

I think I set 15 hand brakes all told on both portions of the train and did that alone as I had only 2 brakemen with me and had sent one to the west of the train to protect the trains moving in the same direction, and had sent the other ahead of the train to protect trains moving towards me. Before sending those flagmen out I had not told either one of them the nature or extent of the trouble we were in. After setting the hand brakes I first put the knuckle in A. T. 86671 and then I went to the head end and chained up D. S. L. 51202, the second car from the engine, as I could not put a knuckle in that because the draw-bar was pulled out on the east end and in order to move that car I had to chain it up to the car between it and the engine. I can best show the process of chaining up by this model. The truck sets in underneath and the chain is fixed to the opposite car and run around in under the transom one side and on the other side over the top, and it is there brought around and usually hooked across to the good draw-bar on the other car. We took the broken coupler out and chained the other car to the bad order and drew up all the slack we could. That is a practice that is usually and customarily engaged in by trainmen in case of a break in two and has been ever since I have been engaged in the business for over 27 years, during which time I have worked for the Pennsylvania, Illinois Central, Southern Railway, Louisiana and Arkansas, Union Pacific and the Santa Fe Companies. After I got the D. S. L. car 51202 chained up I coupled in the air on the front portion and went back and made the coupling on the car

(Testimony of E. J. Kelly.)

A. T. 86671, in which I had put the new knuckle, and cut the air in and let my brakes off and gave the engineer the signal to proceed. The air connections were still all right on the D. S. L. car as they had not been pulled out or broken and I had air through the entire train, and after I got the air hose connected up again I had a through air line and a full 100% of the cars in the train which could be operated from the engine by means of air, and after I got my air I loosened the 15 hand brakes which I had theretofore set and then gave the engineer a proceed signal. Our intentions were, if we could, to pull that entire train in with a chain on the siding. We did not make a flying switch because that is bone-head work in a place of that kind and besides we were on a little over one per cent grade I had one man—and that was myself, and there was a derail in there and I would have had 3 things to do at once. I would have had to cut that car off and get off and turn the switch and then get on and ride it in and it would not have been a safe thing to undertake, even if it had been a practicable thing, and I wouldn't want to undertake a flying switch there with three men. As I started to proceed after chaining up the car I hadn't called the flagmen in. At the time I chained up and started to haul the car I regarded that as the speediest method of clearing the main track, and there was reason at that time for exercising speed because I had a meet with extra 955 and I was ahead of No. 4 and facing four opposite passenger trains, which made it important that I get the track cleared as quickly as possible. I made all the headway I could by myself and

(Testimony of E. J. Kelly.)

was working by myself. It is not customary or usual for a conductor under those circumstances to call to his assistance any one until he has exhausted his own resources. It is the practice for a man to use everything he can until he knows he cannot do anything further without assistance. I did not know that there was any assistance at my command at that time. I knew we had a meet with extra 955 west, but at that time they were a mile from the rear end of my train which wouldn't lack much of being half a mile long, as we had 49 cars, including the caboose. After I gave A. J. Brown, engineer, the go-ahead signal he pulled the train about a car length with the chain, which broke under the steady pull and made it necessary for me to re-tie the train down and go up and see what the trouble was. When I chained up this car the point to which I intended to haul it by means of the chain was to the passing track or side track at Danby, as it was necessary to haul it that distance in order to unblock the main line. I released all the brakes on those 15 cars and after I chained the cars I went back and released them. When we had the train coupled together with the broken knuckle replaced the slack was all shoved back to the rear, but Engineer Brown started it by starting each car separately as it should have been started. He didn't overwork the engine on the start or take it with a jerk, and he had moved about a car length when the second break in two occurred when the chain broke, but didn't pull out any more draw-bars, and then I tied the train down again from the rear end and went over to the front end and

(Testimony of E. J. Kelly.)

cut the engine off and told him that if 955 was up there to tell them to come down. When I tied the train down the second time I set eight hand brakes on the rear end. The first time I tied the train down I guess it took 18 minutes and the second time about 10 minutes as I had all my brakes together the second time. To untie the train the first time took about 7 or 8 minutes and the second time about 6 or 7 minutes. After I had tied the train down the second time, I then chained up the D. S. L. car to the car which was next to the engine and then I had Brown head up the main line east of the switch with his engine, and engine 955 came out on the main line and pulled those two chained up cars into clear. For the 955 to get there after Brown had uncoupled the 1641 took over 5 minutes. At the time the chain broke Brown had not headed in on the west switch but his engine was just within a few feet from the switch, but by cutting off his engine when he proceeded east he left car D. S. L. 51202 and the car next to the engine where engine 955 could pick them up and Brown went down far enough to communicate with the 955 and then he backed up and stopped into clear until the 955 pulled those two cars in on the siding. Brown then backed engine 1641 down over the switch and went in on the siding and got those two cars which were chained together and backed up to the train and pulled the train in and at that time the other two cars on the east end of his engine and the balance of the cars on the west end and with 2 ahead of the engine and 47 behind the engine we got into clear and stayed there until all the passenger trains

(Testimony of E. J. Kelly.)

left. Later we put the crippled car on the spur track and left it at Danby. There was nothing wrong with the coupler on the car ahead of D. S. L. 51202, so that 955 didn't have to chain up anything, as the chains we applied held the second time and 955 then got in on the siding a sufficient distance for the 1641 to clear and get in behind the two cars. But for this break in two we would have been ready to leave Danby at 9:10 after meeting all the trains we were required to meet at that point.

Cross-Examination.

It took me about 50 minutes to clear the main line at Danby after the occurrence of the accident which happened at 8:05. I was at Danby for a total period of 2 hours 25 minutes, as near as I can get at it, and 55 minutes, or maybe a little bit longer, was consumed in clearing the track, but I didn't keep any tab of the time, but possibly my 827 will show that. I have nothing here but the 810 and 813. The 810 telegraphic report of the accident was made and filed at Goffs. The 813 report was made the night of the accident enroute between Danby and Needles and mailed. The only report other than those two was our 827 delay report, of which that is an exact copy, and from which I will read what I said about the delay at Danby. (Reads) "Arrived at Danby at 8:05 p. m. and departed at 10:30, 2 hours 25 minutes, pulling out a draw-bar on D. S. L. 51202 and meet extra 955, No. 1, No. 7, two sections of No. 9 and No. 4." I have my notation in here as to trouble with the 19th car, which reads, "Bad order knuckle in 86671." These two reports were made

(Testimony of E. J. Kelly.)

to Trainmaster Mr. Matthie. The report to the Interstate Commerce Commission evidently was not based upon my report. I state on this form 810 that a knuckle broke on this A. T. 86671 (witness referring to models). That knuckle was broken across about 2 inches and the end was chipped. The heel was chipped about half an inch wide and about half way down the length of the heel of the knuckle. The knuckle was not worn enough to cause any trouble. I took the knuckle out of the car and left it on the ground at the place of the accident. I didn't take it to Danby, but left it on the ground. I just made mention of a broken knuckle. I made it in the shortest form. I did not make report to anyone that the knuckle was worn. Those are the only reports I made. This break on the heel of the knuckle looked to be a fresh break. The break indicated that there was a latent defect in the knuckle. There was a new break on heel of the knuckle—a piece chipped out. It was new. I gave the heel of the knuckle just a quick examination as it was necessary for me to get the line open up there as quickly as possible. I sized it up the best I could at the time. I would consider it a thorough examination. When I examined the knuckle the break indicated that it was a fresh break—there was no rust there to indicate that it was an old break. There was a small sand hole in it, what they call a sand hole, where the casting don't thoroughly melt together. I remember that. There is a pull on all knuckles. There was possibly 2 things might have caused the break—the vibration of the train might have caused these

(Testimony of E. J. Kelly.)

links to tangle and as the cars were subject to all weather conditions we have cases where they get into that shape and the jar, but you can see how much of a jar it will take to open it, and then in case the lock should be broken is another thing that could produce it. The lock was O. K. in this car. I used the same lock over and didn't put in a new lock. Now you understand you take a train in motion where the links are subject to weather conditions, they will get tangled and get in this shape, and a sudden jar or slack or anything, if a knuckle or draw-bar is not working properly will permit the lock to open. In time you know the rust forms on there. It is the continued use of it in all kinds of weather that causes the rust. There was no jar in that train until we felt the air going into emergency. I don't think the engineer used the air just before he stopped. He claims he did not and I don't think he used the air. I couldn't feel any jar of any kind. He had no occasion to use the air. He had not shut off the power and he was drifting along. I was on the train. Usually going into that point slowing up for the switch it is not necessary to set the air. He leaves off the steam a little at a time until they get the switch open and then he pulls in. There was no sudden jar of the train only when the air went into emergency, and the air going into emergency was produced by the knuckle slipping by. The cause of that knuckle slipping by was not the worn condition of the knuckle. I don't think that is it altogether. As I tell you, the vibration of the train was liable to kink that chain and permit that to slip by. The vibra-

(Testimony of E. J. Kelly.)

tion of the train would kink this chain, which would shorten the cut off chain, and if they had a little jar it would open that and permit those to slip by. That is exactly what I think done it. The knuckle possibly didn't have a clear space against the lock block and chipped a piece off on here. Before I made a report of this accident I was to determine what was the cause of it as nearly as I could. I couldn't say whether Mr. Matthie received that knuckle in his office. I don't know if he ever saw this knuckle I threw off the train there. We usually leave it lay until the section men pick it up and put it in the scrap box. The trainmaster always makes an investigation and he had one in regard to this case at Needles. Mr. Matthie asked me the next day if I remember rightly what was done with the knuckle and I told him it was left on the ground. My report there says it was left on the ground, the draw-bar and the material, at this west switch. I don't know whether that knuckle is stated to be there, but that knuckle was left there and my report shows the draft rigging was left there at the west switch. There is no mention made of the knuckle in there as to where the knuckle was left. There is no mention of it made in that report, but I stated to Mr. Matthie where the knuckle was. It is our business to tell him where we leave those things. This knuckle was also broken on the tongue. There was sufficient space on the side track there to hold both trains. The time consumed by me in chaining up the car in the first instance I would judge was about 35 or 40 minutes. I went to the rear end first and coupled up 86671,

(Testimony of E. J. Kelly.)

made the coupling, cut in the air and let the brakes off. After I had all the brakes off I gave the engineer a proceed signal. After pulling the train about a car length the chain broke. I was trying to take the entire train in on the siding by the use of the chain. I don't think hauling the entire train by means of a chain is a dangerous proposition. After this chain broke the first time I re-tied the train down and went back to the head end and sent our engine, the 1641, up to notify the 955 to come down and pull these cars in. The matter of rechainning it the second time was only a matter of hooking the chains together. Then the engineer on 955 hitched onto the first car in the train and pulled the good car and the car that had the pulled out draw-bar into the siding. The reason that the engineer on the 955 didn't take that car up and put in on the switch in the first place was they had too many passenger trains due there, and it would delay the traffic if he did that. He had no occasion to do that. He would have to push his train out on the main line and put a flag out against the passenger trains. From where he was at it would have taken him at least 30 minutes to back out on the main line. By the time he got to the rear end of his train and put a flag out a distance to insure the stopping of these passenger trains with safety, and shoving his train out, he couldn't have done it in less than 30 minutes. He would have to send a flag out a sufficient distance to insure the safety of that passenger train. At that location he would have to send a flagman more than half *or* mile or half a mile at least. The train would

(Testimony of E. J. Kelly.)

have to wait there until he got sufficient distance to stop that passenger train and make sure everything was all right before they would have attempted any such move as that. If I called this engineer in the first place, just as soon as the car was chained up and had him haul the two cars in there, I would have done it much sooner than it was done, but he was half a mile away and I had no way of getting to him. After this car was chained up in the first instance I could not have cut off the two cars from the main line and have hauled the car onto the siding because at the time that happened No. 7 was due there and extra 955 was in on the east end of the passing track. I couldn't have whistled back 955 for if we had whistled 955 back it would have meant for the 955 to back on the main line and hold the passenger trains, and I had no occasion to know that their brakeman was already back on the main line. The chances were he was not there as he had no occasion to be out there. I know his engine was in the clear. When the engine is in the clear the markers and headlights are covered. Our man was flagging No. 7. Our engine couldn't have taken those 2 cars up there and whistled 955 back and put the 2 cars clear on the siding and come back and put our train in on the siding, because if he had done that the crew on the 955 wouldn't know but what I was back there broke in two and giving my engineer a signal to back up, and he would have had to move his train to get it back a sufficient distance for us to put these two cars in on the siding up there or about half a mile. He would have had to back up over the

(Testimony of E. J. Kelly.)

spur to permit me to get up there. He would have had to back engine 955 back past the spur. I cannot tell the exact distance from the side track. It might be 28 car lengths or maybe not so far, I didn't measure it. I can't say how many cars he had in his train. It keeps a man pretty busy to keep tab of his own train and let the other fellow alone.

Redirect Examination.

At the time we were ready to proceed the headlights were out. I have no means of ascertaining from my train book the exact length of time which occurred between the first knowledge I had of the break in two and the time when we finally got in on the siding. My record here shows the total delay at Danby, arriving there at 8:05 and departing there at 10:30, to be 2 hours 25 minutes. I was on top of the train when the break in two occurred. After the break in two our flagman went out immediately. It was not necessary for me to tell him to go. 5 minutes after the break in two I started to tie the rear end of the train down. I tied the middle part down first. It might have been more than 5 minutes when I tied the rear end down. It took me possibly 8 or 10 minutes to tie the middle part down. When I tied the middle end I went down and looked at the draw-bar on 86671 and then went to the rear end and tied the rear end down. It took me 5 or 6 minutes to tie the rear end down. I would judge it would take 5 or 6 minutes to go up there, 49 car lengths to where the engineer was, and I then proceeded to chain up. Engineer Brown helped me chain up the first time, but I don't

(Testimony of E. J. Kelly.)

know how exactly how long it did take us. Brown had the chain there. Maybe it took us 5 or 6 minutes and maybe a little longer and maybe not so long, and then I went back to release the brakes of the first part of the train as quick as I could. We had to go back and make the coupling first after we made the chain up, and I guess it was 5 or 6 minutes I was getting back there to make the coupling, which I did just as quick as I could get the engineer to back up. It didn't take very long. I never released those hand brakes until I made the coupling, but shoved the cars back with the brakes set. To make the coupling required a couple of minutes from the time I give the engineer the signal until we got coupled up and after I got coupled up to release the brakes on the rear end it required about the same length of time it required to set them, on the first portion it might have been 6 or 7 minutes, or maybe longer, and on the back portion, I had to get down and walk back a ways if the brakes were on the rear end. I had 19 car lengths to go and maybe I was back there 5 or 6 minutes getting those brakes off. Then after I got the brakes off I gave Brown the proceed signal and he pulled the train about a car length and the train broke. Between the time I released the last brake I would judge it was possibly 2 minutes to the time the train broke. After the second break in two I tied the train down again in one piece which took about 5 or 6 minutes, as the train was all in one piece the second time and I didn't have to set so many brakes to hold the train. After the second break in two occurred I first had to chain the D. S. L.

(Testimony of E. J. Kelly.)

car up next to the car next to the engine, but it didn't take very long as it was only a job of hooking the chains together and it wouldn't take over 3 or 4 minutes to do that. We had the chain around the body of the car, that is around the transom, and around the truck bolster. I then sent the engineer up to notify the 955 to come down and between the time Brown left to notify the engine 955 and the time when the 955 pulled up against the car, it possibly was more than 5 minutes, but I didn't keep any tab on that time. From the time engine 955 got down there and coupled onto the two cars until we had them into clear was about 2 minutes. It would be safe to say that from the time they pulled these bad orders into the clear and we coupled hold of them and coupled onto the train and we had the train into clear, during which I had to go back and release the brakes again, was 15 minutes. When the train was in the clear I closed the west main line switch and then we were in on the passing track and out of the way of the passenger trains. After the 955 had backed out and gone and the passenger trains had gone we dropped the two cars in the spur track—the bad order car and the one ahead of it as we had them ahead of the 1641; they were coupled onto the 1641, so we just shoved them off and cut off from them and threw the switch open and let them drift in. That is not what I refer to as a flying switch when I put those cars in on the spur, and there was no difficulty at all in letting those cars in on the spur by gravity after our engine pulled away from them, as it was a gravity line and they would run in there

(Testimony of E. J. Kelly.)

themselves. After the 2 cars had run in on the spur I left the bad order car there and ran in on the spur and picked up the car that had formerly been next to the engine and pulled it out from the spur and pushed it back on the passing track and coupled up my train. After I closed the west switch the time which elapsed before I again got my train connected up and ready to move is shown by the train sheet. I couldn't make a move until the 955 left there because the 955 was in my way. He couldn't back out in the face of the passenger trains and he couldn't get by me because I was occupying the west end of the passing track and the 955 was on the east end; so that I could not move until the 955 had backed out onto the main line through the east switch and pulled up on the main line past me and I had to wait until they went before I could do any work. Our train arrived at Danby at 8:05 and No. 7 was due there at 8:15. There was room enough on that siding for both my train and 955 to be in the clear and neither one of them was on the main line. We held up No. 7 at Danby, but I don't know just how long she was held up. She arrived there before the line was cleared and No. 7, as well as I remember, came there on time. There had been 35 or more minutes consumed by us on the main line after the first break in two occurred. All that time was not lost by reason of the fact that the train broke in two as the knuckle breaking caused the break in two first. All that work of tying the train down and re-chaining the car had to be done over because we had to replace that broken knuckle with a new knuckle.

Testimony of G. F. Smith.

G. F. Smith, recalled by defendant, testified:

Direct Examination.

After the 955 on October 10 left Danby, after having been delayed by the extra 1641, they were given preferred movement from Danby to Barstow. They made the run in 8 hours and 7 minutes, which included 40 minutes at Bagdad for the crew to eat and 22 minutes at Siberia for No. 17, which is the Phoenix-Los Angeles passenger and mail train, to pass, and 25 minutes at Argos meeting No. 10. Even with those delays I would say that train 955 was given an expedited run, as those are minor delays. We can't let a passenger train pass or meet one in less than 20 or 25 minutes, considering clearing time and all. But for the delay to which the 955 was subjected by reason of the break in two of the 1641 at Danby there was no reason why the 955 should not have completed its run to Barstow within its usual and customary running time insofar as the train sheets show. The customary and usual running time of a train of the character of 955 between the time the crew went on duty at Needles and the time the train arrived at Barstow would be 12 hours.

Cross-Examination.

The regular running time of a train like 955 from Danby to Barstow, counting the usual delays, is 8 hours, and in this case extra 955 west consumed 8 hours and 7 minutes.

**Testimony Particularly Applicable to Counts 12
to 16, Inclusive.**

(Statement of defendant's counsel.)

That concludes defendant's testimony in support of its special defense as to counts 7 to 11. The defendant now, in addition to the testimony heretofore offered in defense of the preceding counts, insofar as it is applicable thereto, desires to introduce further testimony in support of its affirmative defense to counts 12 to 16, inclusive, as follows:

Testimony of L. C. Powell.

L. C. Powell, for defendant, testified:

Direct Examination.

I was the conductor in charge of extra 1656 east, a train of defendant, on October 21 and 22, 1914. We left Barstow at 10 o'clock p. m. The customary and usual running time of a train such as 1656 between Barstow and Needles is about 12 or 13 hours. At the time we left Barstow on October 21, 1914, there was nothing in or about my train or any part of the equipment in that train that I knew of which would cause me to foresee that we could not make the trip to Needles within the customary and usual running time. At the time I left Barstow in charge of the 1656 east there was no condition with which I was acquainted either with respect to traffic, climate, other trains, or the condition of the equipment in my train which would cause me to foresee that we could not make the trip to Needles within the customary running time. We were delayed on that trip by causes other than the usual causes in meeting other trains, taking

(Testimony of L. C. Powell.)

water and causes usually encountered at mile post 691 where we had an unusual delay, which delayed us the first time from 2:20 a. m. until 3:40 a. m. on October 22, 1914. I think my 827 will show the exact figures.

(Statement by defendant's counsel): If Your Honor, please, you will observe in the summary which I furnished Your Honor and the counsel for the Government that the report to the Interstate Commerce Commission shows a delay of 4 hours and 25 minutes at mile post 691. I regard it unnecessary under the views which Your Honor has intimated as to this law, to undertake to justify more delay than that which is commensurate with the excess service charged in the complaint. I am prepared to show a delay of 4 hours and 25 minutes. The complaint charges one hour excess service. There were 2 accidents. I regard it as unnecessary to consume the time which it would take to go into the details with respect to both accidents, but I will do so if in the opinion of Your Honor it is necessary for us to do more than to show a justifiable delay of more than 1 hour.

The Court: If the defendant shows an excusable delay of 1 hour and 10 minutes that satisfies this charge as I understand it.

Mr. Burks: That is our view of the law and I do not want to take up more time than necessary to satisfy the law.

Mr. Walter: If the court please, as plaintiff sees this a delay of 1 hour and 10 minutes might have occurred, and yet, under the ruling of the Ninth Circuit Court of

(Testimony of L. C. Powell.)

Appeals the crew could have been released within the 16 hours—

The Court: That question is not here now. The question now is you charge that on this train the company permitted its employes to remain in the service 17 hours, or 1 hour excess, and if the defendant company shows a justifiable delay of 1 hour within the law, that would satisfy the charge that they had worked their men over 17 hours. Now, what kind of a delay would come within the law is another question altogether, and the other question, as counsel suggests, as to what the company should have done in order to relieve the crew is another question entirely.

(Witness continuing): We were delayed 1 hour 20 minutes at mile post 691 at that time. I am familiar with the topography of the country in and near mile post 691. That profile (introduced in evidence as Defendant's Exhibit A) shows the approximate grade of the line in the vicinity of mile post 691. As we were approaching mile post 691 at about 8 or 9 miles an hour I was sitting in the cupola of the caboose and suddenly the train stopped all at once and I looked at the air gauge, the rear brakeman was standing down below, and I says "we are in two somewhere, or the air is all gone." I said to the rear brakeman, "You go back and flag; it must be in two entirely because it cannot be a bursted hose as this air escaped so quick." I went and tied down I think it was 8 or 9 hand brakes on the rear of the train sufficient to hold it for a week if necessary, or if we were going to be there that long, and I started towards the head end of the train. I got about half

(Testimony of L. C. Powell.)

way, probably, between the engine and the caboose, and I met the engineer, Mr. Galligan, and he says, "we have got a draw-bar out up there, out of the east end of the car." I went up there with him and inspected it thoroughly and I saw that the draw-bar was out there and lying down on the bank, and I found on examination that one of the yoke rivets or both of the yoke rivets were broken—one was a new break and the other was an old break, but at the top was the old break where it could not have been discovered and the lower half of the rivet still in position and was still in there. I did not see the upper half and it wasn't there to my knowledge. It was not such a break as could have been discovered from the outside. It was impossible to discover it from the outside. I made an 810 report of that accident, which is the telegraphic report which it is customary to send from the nearest telegraph office, and I made it at Ludlow. After I made the 810 report I made a further written report of that accident. Those reports were made by me in the usual and ordinary course of business.

Mr. Burks: I now offer them in evidence as Defendant's Exhibits B and C.

(Witness continuing): With me at the time I examined the break in two was Engineer T. E. Galligan. I had 29 loaded cars and 11 empties in my train, or 1760 tons, and set out 2 at Daggett. The car on which the yoke rivets broke was the twenty-third car from the caboose and there was 16 cars ahead of it. The tonnage in that train was 1635 tons and the tonnage rating of engine 1656 was 1800 tons. Mile post

(Testimony of L. C. Powell.)

691 is between Ludlow and Ash Hill, nearly 5 miles from Ash Hill, and a little over 2 miles from Ludlow, probably $2\frac{1}{2}$. The break in the train was of a nature which would prevent our backing up the train. It was not possible to back the train up and it was necessary to chain that car and take it to Ash Hill to the first side track. Our train was then on the main line so we did chain up the car and took it up to Ash Hill and set it out. We shoved it into the spur track and set it out alone. It was necessary for me to take the head end of the train out as I had to get the head end of the train off the main line too in order to take the car. This car was 16 cars from the engine. From the time the break in two occurred until the time when we returned from Ash Hill to the point where it occurred, 1 hour and 20 or 40 minutes, something like that, had elapsed.

Cross-Examination.

When I left Barstow I had 29 loads and 11 empties or 1760 tons. I set out 2 loads at Daggett, which was 9 miles out of Barstow, and out of Daggett I had 1635 tons. The tonnage for 1600 engines between Barstow and Needles is 1800 tons. In August before this accident the rating of the 1600 engines, including No. 1656, between Barstow and Needles, was changed to 1800 tons. Tonnage rating sheet which you have was annulled, and along in August, 1914, I think it was, we got instructions that 1800 tons would be the tonnage out of Barstow. This is the new rate sheet that went into effect in August. We were operating under that in August, 1914, although it is dated as effective in

(Testimony of L. C. Powell.)

October, 1914. The old rating sheet which you have is dated January 1, 1914, revised January 8, 1914, and it shows the rating for this class of engine from Barstow to Needles as 1600 tons. I stated a while ago it was 1800 tons because we had instructions issued by our superior officers to that effect, and probably you could find them in the bulletin books at Barstow, Bagdad, Needles and other points. This later rating sheet which you hand me is dated October 24, 1914. That is the date this was made probably, but it had been in effect for some time prior. The rating of 1800 tons for engine 1656 was in effect on October 21, 1914. I know that it went into effect before that date because we were handling 1800 tons. We were not handling that tonnage under that old rate sheet which you have, but we were handling 1800 tons before this later one went into effect October 24, under bulletin instructions from our superior officers. The rate sheet that you hand me dated January, 1914, shows the tonnage between Barstow and Needles for the 1600 engines to be 1600 tons, but we had bulletin instructions that 1800 tons would be the tonnage, and I knew what the rating was because I had my attention called to it by a bulletin along in August or September, along in there, in 1914. That tonnage rating sheet that you handed me probably was the tonnage rating sheet in October 21, 1914, but at that time we had instructions to handle more tonnage than shown on the rate sheet and that fully protected us against any violation of this rating sheet. We had instructions to exceed the rating showing on the rating sheet and the supposition

(Testimony of L. C. Powell.)

would be that they were changing the rating to 1800 tons. We had a further delay there at mile post 691. We returned with the engine from Ash Hill and coupled into the train. I coupled the air on the train and discovered that on the second car behind the end sills had been mashed in and it couldn't be handled.

Exception No. 6.

Q. How much longer were you detained there as a result of the second accident?

Mr. Burks: That is objected to as not proper examination and unnecessarily time consuming.

The Court: I think it is proper to inquire into this delay and all the circumstances surrounding it.

Mr. Burks: I object to it on the further ground that testimony as to any other or further delay after the delay of 1 hour and 20 minutes set up in the affirmative defense to counts 12 to 16, inclusive, is incompetent, irrelevant and immaterial to any issue in this case.

The Court: Very well. The objection is overruled. You may have an exception.

(Witness continuing): I think it was at about 6:25 or 6:40 when we got away from Ludlow. We were delayed about 3 hours by reason of the second accident. What caused that delay was that it was impossible to handle the car from the east. I went back to Ludlow and caught No. 10 and put their train away and came up there with their engine and pulled my train back and put it on the side track. What put that car in that condition was that we struck it, I guess, when coupling up. The number of the car that was injured by the second coupling was A. T. 72821, and I think it was

(Testimony of L. C. Powell.)

injured by the first accident. We coupled to it after returning from Ash Hill with just an ordinary coupling and I coupled up the air between the engine and the head car and there was no damage done there and then I heard the escape of the air and went back and found trouble there at car 72821. We took the train back to Ludlow with No. 10's engine and brought No. 10's engine up. That was a walk of $2\frac{1}{2}$ miles, and I came up there and got the train and took it back and let No. 10 go as quick as possible and got our engine and put that bad order car on the spur track and got it out of the way. We proceeded on the way with no more delays to amount to anything or accidents or anything. I stated that the yoke rivets were broken when car C. M. & St. P. 25406, which caused the first break and which we took to Ash Hill. There were two rivets. This back rivet here (illustrating from model) was all there and showed a new break entirely. The other or front rivet, the bottom was there intact and all there and it had broken off at the top up to here, which gave it no strength whatever but it was up in its place right where it belonged—the bottom of it was. The wreckage from that first break was cleared up. The first break happened at 2:20 a. m. and immediately I went to the head end of the train and saw what the trouble was and went up and got a chain and chained this car up, which was the 17th car from the engine and which had the draw-bar pulled out from the east end. The train was going easterly from Barstow to Needles and the draw-bar was out of the front end of the car. I got my chain back there and chained this

(Testimony of L. C. Powell.)

car up to the car ahead of it and took it to Ash Hill along with all the cars in front of it, and when I got to Ash Hill I put this car on the spur and returned with the engine. One of these yoke bolts had a fresh break and the other showed an old break, but it was on the top. There was an old break and the top of the rivet was gone. It was the front rivet that had the old break and the top of the rivet was off. To my best knowledge I think about 2 or 3 inches of the front rivet was missing, as the missing part probably extended down that far. Both parts of the rivet were not there, just the bottom part. The other I didn't find. I don't know when or where it was lost because the head brakeman and the engineer had been working around there and it was all cleared away. If that top part of the bolt had been missing it could not under any consideration have been discovered by ordinary inspection, because it was up there at the top next to the bed of the car and it would be impossible to see it. We can determine that the top of those bolts is not there if the bolt gets loose and comes down, but the carrier cannot determine that those bolts are broken in the way this was until the bolts drop out, unless they break and get loose. Those yoke rivets are made of a special grade of iron, and probably when this broke it might have bent in there. The top of this rivet was obscured from vision because it is up against the body of the car. It fits in between the draft timbers, which are on either side of the yoke, and there is no way of getting over here above the rivet to see it. There is no way whereby it could be

(Testimony of L. C. Powell.)

discovered that the bolt was broken unless it gets loose unless you take the draw-bar out of the car. Taking up the slack or pulling out the slack would not assist in any way unless that bottom part came out. When it is held at the top it is held intact at the bottom. I have seen them come loose and come out, and then you can tell from the bottom that they are out or broken, but as long as they are setting up there against the bed of the car they won't come out. I did not retain the parts of the rivet that were left in the draw-bar, but left them laying there with the draw-bar.

Redirect Examination.

We had run with that train from Barstow to Ludlow, a distance of 56 miles, before this break in two occurred.

Testimony of T. E. Galligan.

T. E. Galligan, a witness for defendant, testified:

Direct Examination.

I was an engineer in the employ of the defendant on engine 1656 at the time extra 1656 broke in two at mile post 691 on October 22, 1914. We were at Ludlow for Santa Fe 17 westbound and after it went by we headed out on the main line, shut the switch and started on our way eastward. Leaving this switch it is kind of down hill for a little ways and we get a run on of perhaps 24 or 25 miles an hour and we can keep that speed for a couple of miles and then we start up a grade of about 1 per cent. This grade is about a mile and a half long. As we were going up that grade the train kept slowing down

(Testimony of T. P. Galligan.)

until we got to a speed of about 10 miles an hour as we were on a steady pull all the while and working with a wide open throttle. I did not have any occasion after leaving Ludlow to make an application of air and between Ludlow and the point of the break in two I had not touched the air. I had handled the train properly between Barstow and Ludlow to the best of my knowledge. I had not had any trouble and had not had any occasion to use the emergency air from the time I left Barstow on this trip that I remember of, and I was handling my train properly and carefully from the time I left Ludlow and on and till the time the train broke in two. At the point where the train broke in two the grade is about 1 per cent and the entire train was on that grade. We were on a steady pull. After the break in two I thought it was caused by pulling off an air hose or a busted air hose at first and I got down on the ground to see what it was and I started back along the train. It was dark so I lit a torch before I got down and started back in the train. I probably got back about 14 or 15 car lengths and found this break in two. The two parts of the train were probably standing about a car length apart, so I looked it over and started back then and met the conductor coming up and I told him what was the matter, saying, "we have got a draw-bar out there" and we walked over there and stood looking at it and decided what we wanted to do and by that time we came back to this car. I did not make a minute inspection of the trouble there, but in conjunction with Conductor Powell I made a careful examination of the

(Testimony of T. P. Galligan.)

draw-bar after the car had been set out on the spur at Ash Hill. After we had set the car out on the spur and had pulled the train to the east end of the passing track and were going back with our engine we stopped opposite the car. I wanted to look at it as a matter of curiosity and I got off and the conductor and brakeman got off also and we went over it and the draw-bar was pulled out of the yoke and that yoke was sticking up under the car. They had also taken off the end sills and brake staff and I looked around to see what was the matter with it and I found one of these bolts still sticking in the yoke and kind of bent over. That one had been broke off some time. It was all rusty there. I examined it to see whether it was an old or a new break and it had the appearance of an old break and it was all rusted over. From the time the train broke in two until the time we returned to the point where the break in two occurred, after having gone up to Ash Hill, 1 hour and 20 minutes elapsed. As a general rule I never pay any attention to that, but leave it to the conductor, as he does that kind of work, and according to his record we were about an hour and 20 minutes. After we broke in two at mile post 691 I met the conductor and he started back to the engine to get a chain. One of these chains is very heavy, so we decided to get the chain out of the tank box and drop it to the ground and pull the hind end of this to where the train was, tie the chain to the end of the car and back it up. We did that and I went back and helped him chain up. After we got it chained up we took all of the head end of

(Testimony of T. P. Galligan.)

the train, including this car out of which the draw-bar had been pulled, to Ash Hill, where we headed in at the west end and pulled up to the spur which was about the middle of the passing track. We had a good car behind the car with the draw-bar out, and which had no hand brakes, as its hand brakes had been torn off in the accident. The same jerk that pulled out the draw bar broke the stem of the hand brake and the gear in which the draw-bar pulls, and that rendered it necessary to put some car behind that bad order car to hold it on the hill; for safety we had this good car behind the car with the draw-bar out in order to have a hand brake in case this chain broke. We headed in at Ash Hill and pulled the whole head end of the train to the east end and left the bad order car on the spur. There was no point between mile post 691 and the spur at Ash Hill where this bad order car out of which the draw-bar had been pulled could have been set out. The distance from mile post 691 to Ash Hill is probably 2 or 3 miles. The point at which the train broke in two was on the main line where there is single track and the effect of the break in two made the main line blocked.

Cross-Examination.

We were on an extra train and had no regular running time. The usual running time for a train of that class to go from mile post 691 to Needles depends upon the train you have and the trains on the road that you have to contend with. From mile post 691 to Needles is 113 miles, and under ordinary conditions 6 hours and 15 minutes is the time that

(Testimony of T. P. Galligan.)

should have been required for train 1656 to make this distance without any delay at all. You have no idea of what the ordinary delays are going to be. I have made that run a good many times and I can go over there in about 6 hours and 15 minutes without any delay. We can go at 24 miles an hour and if I was going to estimate the ordinary running time I should estimate it at 7 hours and 30 minutes.

Testimony of G. P. Smith.

G. P. Smith, recalled by defendant, testified:

Direct Examination.

Referring to my train sheet showing the movement of extra 1656 east I will say that between Ludlow and Needles after this train had been delayed on account of the break in two at mile post 691 it was accorded a good movement into Needles. I would call that a preferred run. The usual and ordinary running time of a freight train with 1635 tons less 2 cars between Ludlow and Needles, taking into consideration the usual and ordinary delays incident to operation, is 8 hours, while this train made the run from Ludlow to Needles after the break in two in 7 hours and 40 minutes. But for the break in two at mile post 691 I am able to state from the train sheet that there was nothing that would have prevented the 1656 from having completed its run from Barstow to Needles within 16 hours from the time the crew went on duty.

Cross-Examination.

There is nothing that appears on the train sheet

(Testimony of G. F. Smith.)

which would have prevented it. There was a delay of 1 hour and 20 minutes as the result of a break in two. I have no record as to what time that wreckage resulted from the break in two and the pulling out of the draw-bar from car C. M. & St. P. 25406 was cleaned up. Extra 1656 east left Ludlow at 2:05 a. m. before they met with this trouble at mile post 691. After train 17 had passed, as Mr. Galligan testified, extra 1656 was ready to go on to Needles and left Ludlow at 2:05 a. m. They were moving in an easterly direction when the accident happened at mile post 691 beyond Ludlow at 2:20 a. m. Then they took the defective car to Ash Hill and left the remainder of the train at the scene of the accident on the main track. They did not start for their destination after they set out the first car at Ash Hill, but they went back to their train and it was necessary for No. 10 to pull the train back into Ludlow to clear the main line. After they had the bad order car set in at Ludlow they proceeded on their way at 6:35 a. m.

Exception No. 7.

Q. They were detained there quite awhile in addition to the detention resulting from pulling out of the draw-bar?

Mr. Burks: Objected to as irrelevant, immaterial, incompetent and not proper cross-examination.

The Court: Overruled.

A. Yes.

Q. For how long?

Mr. Burks: The court will, of course, allow me an

(Testimony of G. F. Smith.)

exception to the ruling admitting any testimony with respect to the duration of the second delay?

The Court: Yes.

Mr. Burks: And it will be understood that all this testimony comes in under the same objection.

Q. What was the delay in addition to the delay from pulling the draw-bar out of car C. M. & St. P. 25406?

A. I have no record on this train sheet of these movements at the blind points between telegraph offices. All I can testify to are the figures on this train sheet.

(Witness continuing): The next station in the direction of Needles beyond Ludlow is Klondike. I have a record of the time that this train left Klondike. Extra 1656 east arrived at Klondike at 7:15 a. m. and departed at 7:29, after they met No. 3 there.

Mr. Burks: I now desire to offer in evidence and read into the record rule 50 of the rules of the Interstate Commerce Commission in the matter of preparation, approval, and establishment of rules and instructions for inspection and testing of locomotives, boilers and their appurtenances promulgated by the Interstate Commerce Commission under date of June 2, 1911. This is the testimony which over counsel's objection the court stated I might introduce in support of counts 1 to 6 and I now desire to offer rule 50 as follows:

"Rule 50. Leaks in front of engines. All steam valves, pops and joints, studs, bolts and flues shall be kept in such repair that they will not emit steam in

front of the enginemen tending to obscure their vision.”

This rule is introduced more particularly in support of our affirmative defense to counts 1 to 6.

The defendant thereupon rested on all counts.

PLAINTIFF'S MOTION FOR A DIRECTED VERDICT.

If the court please, we desire to make a motion and to be heard in argument on the questions arising on the motion. (Jury excused.) The Government desires to move the court to instruct the jury to find for the plaintiff as to the first six counts of the Government's declaration. The Government also desires to move the court to instruct the jury to find for the plaintiff as to counts 7 to 11 of the Government's declaration. The Government also desires to move the court to instruct the jury to find for the plaintiff as to counts 12 to 16 of the Government's declaration.

Exception No. 8.

Thereupon said motion was fully argued by counsel for the respective parties, and at the conclusion of such argument the jury was returned into court and the court announced the following:

RULING ON PLAINTIFF'S MOTION FOR A DIRECTED VERDICT.

“Under these views (theretofore expressed by the court at some length as appears from the decision reported in 236 Federal 154) the motion for the directed verdict will be allowed in favor of plaintiff and the court will allow the defendant an exception to

the ruling. Now, gentlemen, from the view which the court takes as to the law applied to the facts, there is but one verdict that you can render and that is *is* for the Government. A form of verdict has been prepared and some one of you gentlemen will please sign it as foreman." The verdict so rendered under the direction of the court was as follows:

(Title court and cause.)

VERDICT.

We, the jury in the above entitled cause, find for the plaintiff United States of America by direction of the court. Los Angeles, California, November 24, 1915.

R. E. MAYNARD,
Foreman.

Exception No. 9.

Thereupon plaintiff moved the court for judgment upon the verdict.

The Court: You may take an order for judgment on the verdict. That leaves it for the court to fix the penalty.

And to that order directing judgment upon the verdict the court will allow the defendant an exception.

The judgment is that the penalty be fixed on each count at seventy-five dollars, making twelve hundred dollars in all.

Thereupon defendant duly excepted to said judgment and by several orders made and entered in said cause, pursuant to stipulations by counsel for the respective parties, was granted until October 15th,

1917, within which to file its bill of exceptions herein as appears from the following:

*In the District Court of the United States of America,
Southern District of California, Southern Di-
vision.*

No. 376—Civil.

THE UNITED STATES OF AMERICA,

Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY, a Corporation,

Defendant.

Stipulation.

Whereas, upon the entry of judgment in the above cause the time within which defendant was required to serve and file its proposed bill of exceptions was by order duly made and entered in the above cause on the 9th day of December, 1915, duly extended until and including February 15th, 1916, and was thereafter, by order duly made and entered in said cause on February 11th, 1916, further extended until March 20th, 1916, pursuant to stipulations according to plaintiff sixty days after the service upon it of said proposed bill of exceptions within which to stipulate to the correctness thereof or to propose amendments thereto, which time was further extended, and

Whereas, said proposed bill of exceptions was served upon plaintiff's attorneys and filed within the time required, and

Whereas, there was thereafter, on January 11th, 1917, duly entered in said cause an order extending to October 15th, 1917, the time for settling and filing its proposed bill of exceptions theretofore served upon the plaintiff and further enlarging and extending until and including November 15th, 1917, the time within which defendant and plaintiff in error herein might file the record and docket the above entitled cause in the United States Circuit Court of Appeals for the Ninth Circuit, and

Whereas, the parties hereto have agreed to the correctness of said bill of exceptions so proposed by defendant and plaintiff in error and thereafter amended in the particulars desired by the plaintiff and defendant in error,

Now, therefore, it is hereby stipulated and agreed that the foregoing is a full, true and correct bill of exceptions in the above entitled cause and that the same need not be submitted to the judge before whom said cause was tried, but may be settled and allowed by any judge of the United States District Court for the Southern District of California, Southern Division, and filed, and that when so settled, allowed and filed, said bill of exceptions, together with the complaint and answer in said cause and the petition for writ of error, assignment of errors, order allowing writ of error, bond, writ of error and citation in error shall constitute the record upon which the above cause may be reviewed by the United States Circuit Court of Appeals for the Ninth Circuit, if filed in said Circuit

Court of Appeals on or before the 15th day of November, 1917, in the manner required by law.

J. ROBERT O'CONNOR,

United States Attorney,

By CLYDE R. MOODY,

Assistant United States Attorney,

Attorneys for Plaintiff.

E. W. CAMP,

ROBERT BRENNAN,

PAUL BURKS,

Attorneys for Defendant.

ORDER SETTLING AND ALLOWING BILL OF EXCEPTIONS.

Pursuant to stipulation of counsel for the respective parties, the foregoing bill of exceptions is hereby settled, allowed and ordered to be filed.

Dated Los Angeles, California, this 13th day of October, 1917.

OSCAR A. TRIPPET,

United States District Court Judge.

[Endorsed]: No. 376 Civil. Dept. In the U. S. District Court, Sou. Dist. of California, Southern Division. The United States of America, plaintiff, v. The A. T. & S. F. Ry. Company, a corporation, defendant. Bill of exceptions. Received copy of the within proposed bill of exceptions this 20th day of March, 1916. Clyde R. Moody, asst. U. S. atty., attorney for plaintiff. Filed Oct. 13, 1917. Wm. M. Van Dyke, clerk; by Chas. N. Williams, deputy clerk. E. W. Camp, Paul Burks, Robt. Brennan, 409 Kerckhoff Building, Los Angeles, Cal., telephone Main 2980, attorneys for defendant.

*In the District Court of the United States of America,
Southern District of California, Southern Di-
vision.*

No. 376—Civil.

UNITED STATES OF AMERICA,

Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

Defendant.

Petition for Writ of Error.

The Atchison, Topeka and Santa Fe Railway Company, a corporation, defendant in the above entitled cause, feeling itself aggrieved by the judgment of the court entered on the 27th day of November, 1915, comes now by Paul Burks, Esq., its attorney, and files herewith an assignment of errors, and petitions said court for an order allowing said defendant to procure a writ of error to the Honorable United States Circuit Court of Appeals for the Ninth Circuit, under and according to the laws of the United States in that behalf made and provided, and also that an order be made fixing the amount of security which the defendant shall give and furnish upon said writ of error, and that upon the giving of such security all further proceedings in this court be suspended and stayed until the determination of said writ of error by the

said United States Circuit Court of Appeals for the Ninth Circuit.

And your petitioner will ever pray, etc.

Dated May 24, 1916.

E. W. CAMP,
ROBERT BRENNAN,
PAUL BURKS,

Attorneys for Defendant.

[Endorsed]: No. 376 Civil. Dept. . . . In the U. S. Dist. Court, Sou. Dist. of Calif. Sou. Division. United States of America, plaintiff, v. The A. T. & S. F. Ry. Co., a corp., defendant. Petition for Writ of Error. Filed May 24, 1916. Wm. M. Van Dyke, clerk; by R. S. Zimmerman, deputy clerk. E. W. Camp, Paul Burks, Robt. Brennan, 409 Kirckhoff Building, Los Angeles, Cal., telephone Main 2980, attorneys for deft.

*In the District Court of the United States of America,
Southern District of California, Southern Di-
vision.*

No. 376—Civil.

UNITED STATES OF AMERICA,

Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

Defendant.

Assignment of Errors.

Comes now The Atchison, Topeka and Santa Fe Railway Company, defendant in the above entitled

cause, and files the following assignment of errors on writ of error in the above entitled cause, petition for which said writ of error to review the judgment of this Honorable Court, made and entered in said cause on the 27th day of November, 1916, it files at the same time with this assignment.

Assignment I.

That the United States District Court for the Southern District of California, Southern Division (hereinafter referred to as the court), erred in excluding all testimony offered by the defendant and in refusing defendant's offer of proof as to the changes in methods, practices and properties, and as to the expenditures made by the defendant in anticipation of the effective date of the act of Congress approved March 4, 1907 (34 St. L. 1415), effective March 4, 1908, commonly known as the "Hours of Service Act," for the purpose of minimizing the possibilities of violations of such act, for the reason that such testimony, and all thereof, was relevant and competent as directly bearing upon and as peculiarly pertinent to the question as to whether defendant habitually and at the times mentioned in the various counts of the complaint was exercising proper precautions to avoid such violations, and as establishing the facts relied upon by the defendant under the plea of justification and excuse set forth in its answer, and as showing that defendant had so adjusted its properties, so placed its terminals, stations and relay points, so arranged the runs of its crews and taken such other reasonable precautions as were, in the exercise of proper care,

prudence and foresight, consistent with the practical operation of its railroad, required of it.

Assignment II.

That the court erred in permitting plaintiff, upon cross-examination of defendant's witnesses, to inquire into the causes and duration of other and further delays to the train and members of the crew thereof involved in counts 12 to 16, inclusive, and especially the delays at the station of Ludlow, after defendant had shown justifiable and excusable delay in the service charged in said counts of the complaint to have been in violation of said Hours of Service Act.

Assignment III.

That the court erred in sustaining plaintiff's motion to instruct the jury to find for the plaintiff as to the first six counts of the Government's declaration (complaint) for the reasons following:

(a) Because the grounds upon which said motion was based were not stated, by reason whereof neither the court nor the defendant was apprised of the grounds relied upon by said plaintiff in support of its motion;

(b) Because the evidence introduced by defendant fully sustains defendant's plea of justification and excuse for the excess service set forth in its answer;

(c) Because, at all events, the evidence introduced by defendant to sustain its plea of justification and excuse, as set forth in its answer, raised questions of fact for the exclusive determination of the jury and the court, in assuming to review such evidence and to direct a verdict thereon, thereby invaded and

usurped the province of the jury to the prejudice of defendant's rights in the premises;

(d) Because the ruling of said court upon said motion was contrary to the plain terms and provisions and contrary to the reasonable construction of said Hours of Service Act;

(e) Because the ruling of said court upon said motion was contrary to and in conflict with the practical, contemporaneous construction placed upon said Hours of Service Act by the administrative body to which, by the terms of said act, enforcement thereof was entrusted and upon which the defendant, in the practical operation of its railroad, had reason to and did rely.

Assignment IV.

That the court erred in sustaining plaintiff's motion to instruct the jury to find for the plaintiff as to counts 7 to 11, inclusive, of the Government's declaration (complaint) for the reasons following:

(a) Because the grounds upon which said motion was based were not stated, by reason whereof neither the court nor the defendant was apprised of the grounds relied upon by said plaintiff in support of its motion;

(b) Because the evidence introduced by defendant fully sustains defendant's plea of justification and excuse for the excess service set forth in its answer;

(c) Because, at all events, the evidence introduced by defendant to sustain its plea of justification and excuse, as set forth in its answer, raised questions of fact for the exclusive determination of the jury and the court, in assuming to review such evidence and

to direct a verdict thereon, thereby invaded and usurped the province of the jury to the prejudice of defendant's rights in the premises;

(d) Because the ruling of said court upon said motion was contrary to the plain terms and provisions and contrary to the reasonable construction of said Hours of Service Act;

(e) Because the ruling of said court upon said motion was contrary to and in conflict with the practical, contemporaneous construction placed upon said Hours of Service Act by the administrative body to which, by the terms of said act, enforcement thereof was entrusted and upon which the defendant, in the practical operation of its railroad, had reason to and did rely.

Assignment V.

That the court erred in sustaining plaintiff's motion to instruct the jury to find for the plaintiff as to counts 12 to 16, inclusive, of the Government's declaration (complaint) for the reasons following:

(a) Because the grounds upon which said motion was based were not stated, by reason whereof neither the court nor the defendant was apprised of the grounds relied upon by said plaintiff in support of its motion;

(b) Because the evidence introduced by defendant fully sustains defendant's plea of justification and excuse for the excess service set forth in its answer;

(c) Because, at all events, the evidence introduced by defendant to sustain its plea of justification and excuse, as set forth in its answer, raised questions of fact for the exclusive determination of the jury and

the court, in assuming to review such evidence and to direct a verdict thereon, thereby invaded and usurped the province of the jury to the prejudice of defendant's rights in the premises;

(d) Because the ruling of said court upon said motion was contrary to the plain terms and provisions and contrary to the reasonable construction of said Hours of Service Act;

(e) Because the ruling of said court upon said motion was contrary to and in conflict with the practical, contemporaneous construction placed upon said Hours of Service Act by the administrative body to which, by the terms of said act, was entrusted the enforcement thereof, and upon which the defendant, in the practical operation of its railroad, had reason to and did rely.

Assignment VI.

That the court erred in granting plaintiff's motion for a judgment in its favor and against the defendant, made at the time this cause was submitted to the court for its decision, for the reason that it affirmatively appeared from the evidence that the retention in service during the period mentioned in plaintiff's complaint of employed mentioned in counts 1 to 6, inclusive, of said complaint, was not in violation of the act of Congress entitled "An act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employes thereon," approved March 5, 1907 (34 St. L. 1415), because:

(a) The delay to which the train in said counts of said complaint described and the employes in charge thereof was the result of a cause not known to the

defendant or to any officer or agent in charge of such employes, at the time when said employes left a terminal and which could not have been foreseen; and

(b) That the retention in service during the time mentioned in said counts of said complaint of each of the employes in said counts named, was the result of a casualty and of an unavoidable accident, by reason whereof said act of Congress did not apply to the retention in service of such employes in excess of sixteen hours under the circumstances as set forth in its answer to said counts of said complaint and as established by the evidence introduced under such answer upon the trial of said cause; and

(c) That the retention in service of the employes mentioned in said counts 1 to 6, inclusive, of said complaint, under the circumstances shown by the evidence, in excess of sixteen hours, was expressly authorized by said act of Congress which did not prohibit but, on the contrary, expressly authorized such service under the circumstances shown by the uncontroverted evidence introduced in support of defendant's plea of justification and excuse.

Assignment VII.

That the court erred in granting plaintiff's motion for a judgment in its favor and against the defendant, made at the time this cause was submitted to the court for its decision, for the reason that it affirmatively appeared from the evidence that the retention in service during the period mentioned in plaintiff's complaint of employes mentioned in counts 7 to 11, inclusive, of said complaint, was not in violation of the act of Congress entitled "An act to promote the

safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (34 St. L. 1415), because:

(a) The delay to which the train in said counts of said complaint described and the employees in charge thereof was the result of a cause not known to the defendant or to any officer or agent in charge of such employees, as the time when said employees left a terminal and which could not have been foreseen; and

(b) That the retention in service during the time mentioned in said counts of said complaint of each of the employees in said counts named, was the result of a casualty and of an unavoidable accident, by reason whereof said act of Congress did not apply to the retention in service of such employees in excess of sixteen hours under the circumstances as set forth in its answer to said counts of said complaint and as established by the evidence introduced under such answer upon the trial of said cause; and

(c) That the retention in service of the employees mentioned in said counts 7 to 11, inclusive, of said complaint, under the circumstances shown by the evidence, in excess of sixteen hours, was expressly authorized by said act of Congress which did not prohibit but, on the contrary, expressly authorized such service under the circumstances shown by the uncontroverted evidence introduced in support of defendant's plea of justification and excuse.

Assignment VIII.

That the court erred in granting plaintiff's motion for a judgment in its favor and against the defendant,

made at the time this cause was submitted to the court for its decision, for the reason that it affirmatively appeared from the evidence that the retention in service during the period mentioned in plaintiff's complaint of employes mentioned in counts 12 to 16, inclusive, of said complaint, was not in violation of the act of Congress entitled "An act to promote the safety of employees and travelers upon railroads by limiting the hours of service of employees thereon," approved March 4, 1907 (34 St. L. 1415), because:

(a) The delay to which the train in said counts of said complaint described and the employes in charge thereof was the result of a cause not known to the defendant or to any officer or agent in charge of such employes at the time when said employes left a terminal and which could not have been foreseen; and

(b) That the retention in service during the time mentioned in said counts of said complaint of each of the employes in said counts named, was the result of a casualty and of an unavoidable accident, by reason whereof said act of Congress did not apply to the retention in service of such employes in excess of sixteen hours under the circumstances as set forth in its answer to said counts of said complaint and as established by the evidence introduced under such answer upon the trial of said cause; and

(c) That the retention in service of the employes mentioned in said counts 12 to 16, inclusive, of said complaint, under the circumstances shown by the evidence, in excess of sixteen hours, was expressly authorized by said act of Congress which did not prohibit but, on the contrary, expressly authorized such

service under the circumstances shown by the uncontroverted evidence introduced in support of defendant's plea of justification and excuse.

Assignment IX.

That said court erred in finding that it was the duty of defendant to relieve the employes named in counts 1 to 6 of the complaint after they had been on duty for sixteen hours and before they reached the terminal to which they were destined, because under the circumstances disclosed by the evidence the said Hours of Service Act did not require that such employes be relieved at any intermediate point.

Assignment X.

That said court erred in finding that it was the duty of defendant to relieve the employes named in counts 7 to 11 of the complaint after they had been on duty for sixteen hours and before they reached the terminal to which they were destined, because under the circumstances disclosed by the evidence the said Hours of Service Act did not require that such employes be relieved at any intermediate point.

Assignment XI.

That said court erred in finding that it was the duty of defendant to relieve the employes named in counts 12 to 16 of the complaint after they had been on duty for sixteen hours and before they reached the terminal to which they were destined, because under the circumstances disclosed by the evidence the said Hours of Service Act did not require that such employes be relieved at any intermediate point.

Assignment XII.

That said court erred in finding that the acts of the

defendant in requiring and permitting the employees named in counts 1 to 6, inclusive, of said complaint to continue on duty to the end of their run was in violation of the provisions of said Hours of Service Act, for the reasons:

(1) That the train of which said employees were in charge had, after starting on its run, been delayed by reason of a casualty and an unavoidable accident; and

(2) That the delay to which said train and said employees were subjected was the result of a cause not known to defendant, or any of its officers or agents in charge of such employees, at the time such employees left a terminal and which could not have been foreseen.

Assignment XIII.

That said court erred in finding that the acts of the defendant in requiring and permitting the employees named in counts 7 to 11, inclusive, of said complaint, to continue on duty to the end of their run was in violation of the provisions of said Hours of Service Act, for the reasons:

(1) That the train of which said employees were in charge had, after starting on its run, been delayed by reason of a casualty and an unavoidable accident; and

(2) That the delay to which said train and said employees were subjected was the result of a cause not known to defendant, or any of its officers or agents in charge of such employees, at the time such employees left a terminal and which could not have been foreseen.

Assignment XIV.

That said court erred in finding that the acts of

the defendant in requiring and permitting the employees named in counts 12 to 16, inclusive, of said complaint to continue on duty to the end of their run was in violation of the provisions of said Hours of Service Act, for the reasons:

(1) That the train of which said employees were in charge had, after starting on its run, been delayed by reason of a casualty and an unavoidable accident; and

(2) That the delay to which said train and said employees were subjected was the result of a cause not known to defendant, or any of its officers or agents in charge of such employees, at the time such employees left a terminal and which could not have been foreseen.

Assignment XV.

That the judgment made, rendered and entered in the above cause in favor of plaintiff on counts 1 to 6, inclusive, is contrary to the evidence introduced upon the trial of said cause, in that it affirmatively appears from said evidence that the retention in service of said employees in said counts of said complaint described during the time in said counts in said complaint mentioned was not in violation of said Hours of Service Act, which did not apply to or prohibit but, on the contrary, expressly authorized such service by such employees in excess of sixteen hours under circumstances as shown by the evidence, and that all service of the employees described in said counts of said complaint in excess of sixteen hours was, under the uncontradicted evidence, justified and excused.

Assignment XVI.

That the judgment made, rendered and entered in the above cause in favor of plaintiff on counts 7 to 11, inclusive, is contrary to the evidence introduced upon the trial of said cause, in that it affirmatively appears from the evidence that the retention in service of said employes in said counts of said complaint described during the time in said counts in said complaint mentioned was not in violation of said Hours of Service Act, which did not apply to or prohibit but, on the contrary, expressly authorized such service of such employes in excess of sixteen hours, under circumstances as shown by the evidence.

Assignment XVII.

That the judgment made, rendered and entered in the above cause in favor of plaintiff on counts 12 to 16, inclusive, is contrary to the evidence introduced upon the trial of said cause, in that it affirmatively appears from the evidence that the retention in service of said employes in said counts of said complaint described during the time in said counts in said complaint mentioned was not in violation of said Hours of Service Act, which did not apply to or prohibit but, on the contrary, expressly authorized such service of such employes in excess of sixteen hours, under circumstances as shown by the evidence.

Assignment XVIII.

That the judgment made, rendered and entered in the above cause, and the whole thereof, is contrary to law because:

(a) The delays to which were subjected each of the trains mentioned in plaintiff's complaint and the em-

ployes mentioned in said complaint who were in charge of such trains, were the results of causes not known to the defendant, or any officer or agent in charge of such employes, at the time when such employes left a terminal, and which could not have been foreseen; and

(b) That the retention in service during the times mentioned in said complaint of each of the employes therein mentioned, was in each instance the result of a casualty and an unavoidable accident, by reason whereof said act of Congress did not apply to the retention in service of said employes in excess of sixteen hours under the circumstances as shown by the uncontroverted evidence; and

(c) That under and by virtue of the terms of the proviso in section 3 of said act of Congress entitled "An act to promote the safety of employes and travelers upon railroads by limiting the hours of service of employes thereon," approved March 4, 1907 (34 St. L. 1415), set forth and contained, the retention in service during the times in said complaint mentioned of the employes in the several counts in said complaint described, and for such period in excess of sixteen hours as would enable said employes to complete their runs to the terminals to which they were destined, under the circumstances which were shown by the uncontroverted evidence to have caused such service was expressly authorized and the said act of Congress did not apply to and did not prohibit the said service of said employes; and

(d) That the said judgment was based upon the view of the trial court that it was the duty of the defendant to relieve each of the employes in charge

of each of the trains in the complaint described before they had completed their runs and at points which were not terminals and before their regular terminals had been reached, in order to prevent their retention in service in excess of sixteen hours, whereas said Hours of Service Act does not require but, on the contrary, expressly authorized the defendant to retain such employes in service until completed their runs in the circumstances disclosed by the evidence.

And upon the foregoing assignment of errors, and upon the record in said cause, the defendant prays that said judgment may be reversed.

E. W. CAMP,
ROBERT BRENNAN,
PAUL BURKS,

Attorneys for Defendant.

[Endorsed]: No. 376 Civil. Dept. In the U. S. District Court, Sou. Dist. of Calif., Southern Division. United States of America, plaintiff v. The A. T. & S. F. Ry. Co., a corporation, defendant. Assignment of Error. Filed May 24, 1916. Wm. M. Van Dyke, clerk; by R. S. Zimmerman, deputy clerk. E. W. Camp, Paul Burks, Robt. Brennan, 409 Kerckhoff Building, Los Angeles, Cal., telephone Main 2980, attorneys for defendant.

*In the District Court of the United States of America,
Southern District of California, Southern Di-
vision.*

No. 376—Civil.

UNITED STATES OF AMERICA,

Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

Defendant.

Order Allowing Writ of Error.

Upon motion of Paul Burks, Esq., one of the attorneys for defendant, and upon filing a petition for a writ of error and an assignment of errors—

It is ordered that a writ of error be and the same is hereby allowed to have reviewed in the United States Circuit Court of Appeals for the Ninth Circuit, the verdict and judgment heretofore entered herein.

Dated May 24, 1916.

BLEDSON,

United States District Judge.

[Endorsed]: No. 376 Civil, Dept. In the U. S. Dist. Court, Sou. Dist. of Calif., Sou. Division. United States of America, plaintiff, v. The A. T. & S. F. Ry. Co., a Corp., defendant. Order Allowing Writ of Error. Filed May 24, 1916. Wm. M. Van Dyke, clerk; by R. S. Zimmerman, deputy clerk. E. W. Camp, Paul Burks, Robt. Brennan, 409 Kerckhoff Building, Los Angeles, Cal., telephone Main 2980, attorneys for deft.

*In the District Court of the United States of America,
Southern District of California, Southern Di-
vision.*

No. 376—Civil.

UNITED STATES OF AMERICA,

Plaintiff,

vs.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

Defendant.

Bond.

Know All Men by These Presents:

That we, The Atchison, Topeka and Santa Fe Rail-
way Company, a corporation, as principal, and National
Surety Company, as surety, are held and firmly bound
unto United States of America, the plaintiff above
named, in the sum of two thousand dollars (\$2,000.00),
to be paid to said United States of America, to which
payment, well and truly to be made, we bind ourselves,
jointly and severally, and our and each of our suc-
cessors and assigns, firmly by these presents.

Sealed with our seals, and dated, this 23d day of
May, A. D. 1916.

Whereas, the above named defendant, The Atchison
Topeka and Santa Fe Railway Company, has sued out
a writ of error to the United States Circuit Court of
Appeals for the Ninth Circuit, to reverse the judgment
in the above entitled cause by the District Court of
the United States of America, Southern District of
California, Southern Division, rendered and entered
in said cause on the 27th day of November, 1915;

Now, therefore, the condition of this obligation is such that if the above-named defendant, The Atchison, Topeka and Santa Fe Railway Company, shall prosecute said writ of error to effect, and answer all costs and damages if it shall fail to make good its plea, then this obligation shall be void; otherwise to remain in full force and effect.

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY,

By A. G. WELLS,
Its General Manager,

Attest:

G. HOLTERHOFF, JR.,
Its Western Asst. Secretary,

Principal.

NATIONAL SURETY COMPANY,

By CHAS. SEYLER, JR.,

Its Attorney-in-Fact,

Surety.

[Documentary stamp 1ct. Cancelled 5/23/16, B. M.]
State of California, County of Los Angeles—ss.

On this 23rd day of May, A. D. 1916, before me, Hazel Jones, a notary public in and for the said county and state, residing therein, duly commissioned and sworn, personally appeared Chas. Seyler, Jr., known to me to be the person whose name is subscribed to the within instrument, as the attorney-in-fact of National Surety Co., and acknowledged to me that he subscribed the name of National Surety Co. thereto as surety and his own name as attorney-in-fact.

In witness whereof, I have hereunto set my hand

and affixed my official seal the day and year in this certificate first above written.

(Seal)

HAZEL JONES,

Notary Public in and for Said County and State.

The foregoing bond is hereby approved as to form and as to sufficiency of surety, this 24 day of May, A. D. 1916.

BLEDSON,

United States District Judge.

[Endorsed]: No. 376 Civil, Dept. U. S. Dist. Court, Sou. Dist. of Calif., Sou. Division. United States of America, plaintiff, v. The A. T. & S. F. Ry. Co., a Corp., defendant. Bond. Filed May 24, 1916. Wm. M. Van Dyke, clerk; by R. S. Zimmerman, deputy clerk. E. W. Camp, Paul Burks, Robt. Brennan, 409 Kerckhoff Building, Los Angeles, Cal., telephone Main 2980, attorneys for deft.

